Governments SANBAG Working Together

San Bernardino Associated Governments

1170 W. 3rd Street, 2nd Floor, San Bernardino, CA 92410
Phone: (909) 884-8276 Fax: (909) 885-4407
www.sanbag.ca.gov

TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

AGENDA

Plans and Programs Policy Committee

July 19, 2006, 12:00 p.m.

Location:
SANBAG Offices
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410
The Super Chief Room

Plans and Programs Committee Membership

Chair
Paul Eaton, Mayor
City of Montclair

Vice Chair
Mark Nuaimi, Mayor
City of Fontana

East Valley Representatives
Kelly Chastain, Council Member
City of Colton

Richard Riddell, Mayor
City of Yucaipa

Larry McCallon, Council Member
City of Highland

West Valley Representatives
Diane Williams, Mayor Pro Tem
Rancho Cucamonga

Mountain/Desert Representatives
Kevin Cole, Council Member
Twentynine Palms

Paul Cook, Mayor
Town of Yucca Valley

James Lindley, Council Member
City of Hesperia

San Bernardino County
Bill Postmus, Supervisor

Paul Biane, Supervisor

Dennis Hansberger, Supervisor

Josie Gonzalez, Supervisor

Gary Ovitt, Supervisor

San Bernardino Associated Governments (SANBAG) is a council of governments formed in 1973 by joint powers agreement of the cities and the County of San Bernardino. SANBAG is governed by a Board of Directors consisting of a mayor or designated council member from each of the twenty-four cities in San Bernardino County and the five members of the San Bernardino County Board of Supervisors.

In addition to SANBAG, the composition of the SANBAG Board of Directors also serves as the governing board for several separate legal entities listed below:

The San Bernardino County Transportation Commission, *which is responsible for short and long range transportation planning within San Bernardino County, including coordination and approval of all public mass transit service, approval of all capital development projects for public transit and highway projects, and determination of staging and scheduling of construction relative to all transportation improvement projects in the Transportation Improvement Program.*

The San Bernardino County Transportation Authority, *which is responsible for administration of the voter-approved half-cent transportation transactions and use tax levied in the County of San Bernardino.*

The Service Authority for Freeway Emergencies, *which is responsible for the administration and operation of a motorist aid system of call boxes on State freeways and highways within San Bernardino County.*

The Congestion Management Agency, *which analyzes the performance level of the regional transportation system in a manner which ensures consideration of the impacts from new development and promotes air quality through implementation of strategies in the adopted air quality plans.*

As a ***Subregional Planning Agency****, SANBAG represents the San Bernardino County subregion and assists the Southern California Association of Governments in carrying out its functions as the metropolitan planning organization. SANBAG performs studies and develops consensus relative to regional growth forecasts, regional transportation plans, and mobile source components of the air quality plans.*

Items which appear on the monthly Board of Directors agenda are subjects of one or more of the listed legal authorities. For ease of understanding and timeliness, the agenda items for all of these entities are consolidated on one agenda. Documents contained in the agenda package are clearly marked with the appropriate legal entity.

San Bernardino Associated Governments
County Transportation Commission
County Transportation Authority
Service Authority for Freeway Emergencies
County Congestion Management Agency

Plans and Programs PolicyCommittee

July 19, 2006
12:00 p.m.

LOCATION:

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor, San Bernardino
The Super Chief Room

CALL TO ORDER - 12:00 p.m.
(Meeting chaired by Mayor Paul Eaton)

I. Attendance
II. Announcements
III. Agenda Notices/Modifications

Notes/Action

1. **Possible Conflict of Interest Issues for the SANBAG Plans and Programs Meeting of July 19, 2006** **Pg. 8**

   Note agenda item contractors, subcontractors and agents which may require member abstentions due to conflict of interest and financial interests. Member abstentions shall be stated and recorded on the appropriate item in the minute summary for each month.

Consent Calendar

Consent Calendar items shall be adopted by a single vote unless removed by Board member request. Items pulled from the consent calendar will be brought up at the end of the agenda.

2. **Plans and Programs Attendance Roster** **Pg.**

   A quorum shall consist of a majority of the membership of each SANBAG Policy Committee, except that all County Representatives shall be counted as one for the purpose of establishing a quorum.

Notes/Action

Discussion Calendar

3. **Request for Proposal (RFP) to Prepare a Public Transit-Human Transportation Coordination Plan for San Bernardino County** **Pg. 10**

   Authorize the Release of RFP C07027 – Public Transit-Human Services Transportation Coordination Plan for San Bernardino County. **Mike Bair**

4. **Presentation of the Results of the Transportation Development Act (TDA) Triennial Performance Audits for the Cities of Barstow and Needles, Mountain Area Regional Transit Authority, Morongo Basin Transit Authority, Omnitrans and Victor Valley Transit Authority.** **Pg. 33**

   Receive results of the TDA Triennial Performance Audits for the Cities of Barstow and Needles, Mountain Area Regional Transit Authority, Morongo Basin Transit Authority, Omnitrans and Victor Valley Transit Authority. **Mike Bair**

5. **Award of Construction Contract 06-056 for Construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 2** **Pg. 35**

   Authorize staff to proceed directly to Board for award of Construction Contract 06-056 for San Bernardino Valley Coordinated Traffic Signal System Program – Tier 2 **Andrea Zureick**

6. **Award of Contract No. 06-055 for Construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1** **Pg. 38**

   1. Approve Contract No. 06-055 with Steiny and Company, Inc. for construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1 in the amount of $1,694,853, as detailed in the Financial Impact Section

   2. Approve amendment to increase Task No. 70107000, Valley Signal Coordination Program, in the amount of $617,753 to be funded by Congestion Mitigation and Air Quality funds set aside for the Valley Signal Coordination Program, as detailed in the financial impact section. **Andrea Zureick**

7. **City of Rancho Cucamonga Project Advancement Agreement** **Pg. 54**

   Approve Project Advancement Cooperative Agreement C07025 with the City of Rancho Cucamonga for the Haven Grade Separation Project. **Andrea Zureick**

Notes/Action

8. **City of Yucaipa Project Advancement Agreement** **Pg. 64**

   Approve Project Advancement Cooperative Agreement C07047 with the City of Yucaipa for the I-10 Oak Glen/Live Oak Interchange Project. **Andrea Zureick**

9. **Request for Proposal (RFP) for Freeway Service Patrol (FSP) Towing Services** **Pg. 75**

   Approve the release of RFP No. C07028 for the provision of FSP Towing Services along Interstate (I)-10, I215, and State Route (SR) 60. **Kelly Lynn**

10. **Measure I 2010-2040 Strategic Plan Workshop on Project Cost Estimates and Revenue Projections** **Pg. 90**

    For purposes of further Measure I 2010-2040 Strategic Plan development, accept:

    1) Expenditure Plan project cost increases as discussed at the workshop and detailed in this item, and

    2) Revised Measure I 2010-2040 revenue projection of $8.0 billion in 2006 dollars, up from $6.0 billion in 2003 dollars per the Expenditure Plan. **Ty Schuiling**

Public Comments

Items under this heading will be referred to staff for further study, research, completion and/or future actions.

11. **Additional Items from Committee Members**

12. **Brief Comments by General Public**

Additional Information

13. **Acronym List** **Pg. 190**

ADJOURNMENT

Complete packages of this agenda are available for public review at the SANBAG offices. Staff reports for items may be made available upon request. For additional information call (909) 884-8276 and ask for Joanne Cook.

The next Plans and Programs Meeting is August 16, 2006.

Meeting Procedures

The Ralph M. Brown Act is the state law which guarantees the public's right to attend and participate in meetings of local legislative bodies. These rules have been adopted by the Board of Directors in accordance with the Brown Act, Government Code 54950 et seq., and shall apply at all meetings of the Board of Directors and Policy Committees.

Accessibility

The SANBAG meeting facility is accessible to persons with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Clerk of the Board at least three (3) business days prior to the Board meeting. The Clerk's telephone number is (909) 884-8276 and office is located at 1170 W. 3rd Street, 2nd Floor, San Bernardino, CA.

Agendas – All agendas are posted at 1170 W. 3rd Street, 2nd Floor, San Bernardino at least 72 hours in advance of the meeting, Staff reports related to agenda items may be reviewed at the SANBAG offices located at 1170 W. 3rd Street, 2nd Floor, San Bernardino and our website: www.sanbag.ca.gov.

Agenda Actions – Items listed on both the "Consent Calendar" and "Items for Discussion" contain suggested actions. The Board of Directors will generally consider items in the order listed on the agenda. However, items may be considered in any order. New agenda items can be added and action taken by two-thirds vote of the Board of Directors.

Closed Session Agenda Items – Consideration of closed session items *excludes* members of the public. These items include issues related to personnel, pending litigation, labor negotiations and real estate negotiations. Prior to each closed session, the Chair will announce the subject matter of the closed session. If action is taken in closed session, the Chair may report the action to the public at the conclusion of the closed session.

Public Testimony on an Item – Members of the public are afforded an opportunity to speak on any listed item. Individuals wishing to address the Board of Directors or Policy Committee Members should complete a "Request to Speak" form, provided at the rear of the meeting room, and present it to the Clerk prior to the Board's consideration of the item. A "Request to Speak" form must be completed for *each* item an individual wishes to speak on. When recognized by the Chair, speakers should be prepared to step forward and announce their name and address for the record. In the interest of facilitating the business of the Board, speakers are limited to three (3) minutes on each item. Additionally, a twelve (12) minute limitation is established for the total amount of time any one individual may address the Board at any one meeting. The Chair or a majority of the Board may establish a different time limit as appropriate, and parties to agenda items shall not be subject to the time limitations.

The Consent Calendar is considered a single item, thus the three (3) minute rule applies. Consent Calendar items can be pulled at Board member request and will be brought up individually at the specified time in the agenda allowing further public comment on those items.

Agenda Times – The Board is concerned that discussion take place in a timely and efficient manner. Agendas may be prepared with estimated times for categorical areas and certain topics to be discussed. These times may vary according to the length of presentation and amount of resulting discussion on agenda items.

Public Comment – At the end of the agenda, an opportunity is also provided for members of the public to speak on any subject within the Board's authority. *Matters raised under "Public Comment" may not be acted upon at that meeting. "Public Testimony on any Item" still apply.*

Disruptive Conduct – If any meeting of the Board is willfully disrupted by a person or by a group of persons so as to render the orderly conduct of the meeting impossible, the Chair may recess the meeting or order the person, group or groups of person willfully disrupting the meeting to leave the meeting or to be removed from the meeting. Disruptive conduct includes addressing the Board without first being recognized, not addressing the subject before the Board, repetitiously addressing the same subject, failing to relinquish the podium when requested to do so, or otherwise preventing the Board from conducting its meeting in an orderly manner. *Please be aware that a NO SMOKING policy has been established for meetings. Your cooperation is appreciated!*

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TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 1

Date: June 19, 2006

Subject: Information Relative to Possible Conflict of Interest

***Recommendation*:** Note agenda items and contractors/subcontractors which may require member abstentions due to possible conflicts of interest.

Background: In accordance with California Government Code 84308, members of the SANBAG Board may not participate in any action concerning a contract where they have received a campaign contribution of more than $250 in the prior twelve months from an entity or individual. This agenda contains recommendations for action relative to the following contractors:

Item No.	Contract No.	Contractor/Agents	Subcontractors
N/A	N/A	*N/A*	N/A

Financial Impact: This item has no direct impact on the SANBAG budget.

Reviewed By: This item is prepared monthly for review by the SANBAG Board of Directors and Policy Committee members.

*

Approved
Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

ppc0607z-ty
60107000

PLANS AND PROGRAMS POLICY COMMITTEE ATTENDANCE - 2006

Name	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
EAST VALLEY												
Richard Riddell	X	X	X	X	X	X						
Kelly Chastain	X	X	X	X		X						
Larry McCallon				X	X							
WEST VALLEY												
Paul Eaton Chair	X		X	X	X	X						
Mark Nuaimi	X		X									
Diane Williams	X	X	X	X	X	X						
MT/DESERT												
Kevin Cole	X	X	X	X	X							
Paul Cook	X	X	X		X							
Jim Lindley	X	X	X	X	X	X						
SAN BERNARDINO COUNTY												
Gary Ovitt	X	X		X								
Josie Gonzales	X	X	X		X							
Dennis Hansberger	X		X	X								
Paul Biane	X	X	X	X								
Bill Postmus		X	X	X								

X - indicates member attended the meeting.

Crossed out box indicates member was not on the committee as of that month.

Empty box indicates committee members did not attend the meeting in that month.

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San Bernardino Associated Governments

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TRANSPORTATION MEASURE I

■ San Bernardino County Transportation Commission ■ San Bernardino County Transportation Authority
■ San Bernardino County Congestion Management Agency ■ Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: **3**

Date: July 19, 2006

Subject: Request for Proposal (RFP) to Prepare a Public Transit-Human Service Transportation Coordination Plan for San Bernardino County

Recommendation:* Authorize the Release of RFP C07027 – Public Transit-Human Services Transportation Coordination Plan for San Bernardino County.

Background: The Safe, Accountable, Flexible, Efficient Transportation Equity Act – *A Legacy for Users* (SAFETEA-LU) made several changes, including establishing a new funding program, in how the Federal Transit Administration (FTA) expects projects to be selected for award. The changes involve three funding programs; Section 5310 (Elderly Individuals and Individuals with Disabilities), Section 5316 (Jobs Access and Reverse Commute) and the new funding program, Section 5317 (New Freedom).

Section 5310 (Elderly Individuals and Individuals with Disabilities) provides capital assistance for the purchase of vehicles and associated equipment by non-profit agencies for the provision of transportation service to elderly individuals and individuals with disabilities for whom mass transportation services are unavailable, insufficient or inappropriate. Under certain circumstances, public agencies may receive these funds where it is determined that there are no non-profit organizations readily available to provide the specialized service. The Section 5310 funds are apportioned to the State of California which conducts an annual competitive application process through the Department of Transportation and project awards are granted by the California Transportation Commission.

*

Approved
Plans and Programs Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

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The Section 5316 (Job Access and Reverse Commute) and 5317 (New Freedom) funds are apportioned as follows: 60% to large urban areas (over 200,000 population), 20% to small urban areas (between 50,000 and 200,000 population) and 20% to rural areas (less than 50,000 population). Section 5316 or JARC funds, as noted above, are now apportioned by formula and must be used for projects that are related to the development and maintenance of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment. Section 5317 or New Freedom is a new program whose funds must be used on projects for new and/or existing public transportation services and public transportation alternatives beyond those required by the Americans with Disabilities Act of 1990.

Under the proposed guidance of FTA, beginning with the Federal Fiscal Year 2007 all projects seeking funds from Sections 5310, 5316 and 5317 must be derived from a locally developed public transit-human services transportation coordination plan. It is the intent of Congress and FTA that, to the extent possible, these funds should be used to leverage non-DOT federal, state and local revenues. Therefore, it will be imperative that the study include representatives from local agencies and organizations that receive federal funding from the 64 Federal programs sponsored by eight Federal departments where some type of transportation service is an allowable use. The eight Federal programs are the: Department of Agriculture, Department of Education, Department of Interior, Department of Health and Human Services, Department of Housing and Urban Development, Department of Labor, Department of Veterans Affairs and the Department of Transportation.

The scope of work contained in the RFP is structured in a way so that the study will identify perceived barriers to coordination, any duplication of transportation services, and any gaps in the provision of transportation to the targeted groups. Due to the differences in how the Section 5310, 5316 and 5317 are apportioned and therefore competed for, the scope of work acknowledges the unique geographic differences of San Bernardino County by requiring that the plan identify public transit-human services transportation coordination efforts and projects by the six subareas used for the Measure I program.

Financial Impact: This item is consistent with the adopted budget. Funding for the development of the RFP and ultimately the award of a contract is contained in Task 31907000-Social Service Transportation Plan. The funding source is LTF – Planning.

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Reviewed By: This item will be reviewed by the Plans and Programs Committee on July 19, 2006.

Responsible Staff: Michael Bair, Director of Transit and Rail Programs

SAN BERNARDINO ASSOCIATED GOVERNMENTS

REQUEST FOR PROPOSALS RFPC07027

PUBLIC TRANSIT-HUMAN SERVICES TRANSPORTATION COORDINATION PLAN FOR SAN BERNARDINO COUNTY

Proposals Due: 4:00 p.m., September 8, 2006

REQUEST FOR PROPOSALS C07027

PUBLIC TRANIST-HUMAN SERVICES
TRANSPORTATION COORDINATION PLAN
FOR
SAN BERNARDINO COUNTY

A. BACKGROUND

The Safe, Accountable, Flexible, Efficient Transportation Equity Act – *A Legacy for Users* (SAFETEA-LU) requires that projects receiving funds from either Section 5310 (Elderly Individuals and Individuals with Disabilities), Section 5316 (Job Access and Reverse Commute), and Section 5317 (New Freedom) be derived from a public transit-human service transportation coordination plan beginning in FFY 2007.

Section 5310 provides capital assistance for the purchase of vehicles and associated equipment by non-profit agencies for the provision of transportation to elderly individual and individuals with disabilities for whom mass transportation services are unavailable, insufficient or inappropriate. Under certain circumstances public agencies may receive these funds where it is demonstrated that there are no non-profit organizations readily available to provide the specialized service. The Section 5310 is apportioned to the State of California which conducts an annual competitive application process through the Department of Transportation and project awards are granted by the California Transportation Commission.

The Section 5316 and 5317 are apportioned as follows: 60% to large urban areas (over 200,000 population), 20% to small urban areas (between 50,000 and 200,000) and 20% to rural areas (less that 50,000 population). Section 5316 funds must be used for projects that relate to the development and maintenance of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment. Section 5317 must be used for projects for new and/or existing public transportation services and public transportation alternatives beyond those required by the Americans with Disabilities Act of 1990.

The San Bernardino Associated Governments is seeking consultant assistance for the development of a public transit-human service coordination plan for San Bernardino County. The coordination plan must be developed in a manner that allows for projects to be selected based on the how these three program funds will be made available as well as give consideration to the very unique areas that comprise a County of 20,000 square miles and a population of 1.99 million. The plan must address public transit-human services transportation coordination within each of the six subareas described below and shown in Appendix A.

The San Bernardino Valley is bordered by the Los Angeles, Orange and Riverside Counties on the west and south and the San Gabriel and San Bernardino Mountains to the north and east and is comprised of approximately 480 square miles and a population of nearly 1.5 million. Within the San Bernardino Valley the western communities of Chino Hills, Chino, Ontario, Montclair, Upland and Rancho Cucamonga are part of the greater Los Angeles/Long Beach/Santa Ana Urbanized Area. The eastern communities of Fontana, Rialto, San Bernardino, Colton, Grand Terrace, Highland, Loma Linda, Redlands and Yucaipa are part

of the Riverside/San Bernardino Urbanized Area. Approximately $3.76 million and $1.48 million Sections 5316 and 5317 respectively are expected to be made available to the San Bernardino Valley from FFY 2006 through FFY 2009.

The Victor Valley with a population of nearly 335,000 is comprised of both a large urban area and a rural area. The urbanized area general consists of the Town of Apple Valley and the Cities of Hesperia and Victorville and a small portion of Adelanto. The Victor Valley is expected to receive apportionments of $571,000 and $240,000 from Sections 5316 and 5317 respectively from FFY 2006 through FFY 2009.

The balance of the County is divided into following four subareas: Mountains (City of Big Bear Lake and unincorporated communities of Big Bear City, Crestline, Lake Arrowhead and Running Springs) with a population of 52,700; North Desert (City of Barstow and unincorporated communities of Hinkley, Yermo, Daggett, Baker and Trona) with a population of 58,800; Colorado River (City of Needles and unincorporated communities of Lake Havasu and Big River) with a population of 8,100); and the Morongo Basin (Town of Yucca Valley, City of Twentynine Palms and the unincorporated communities of Joshua Tree and Landers) with a population of 73,200. These rural areas along with the rural portion of the Victor Valley will be eligible to submit projects for Sections 5316 and 5317 to the State through the Department of Transportation. It is estimated that the statewide apportionments of Section 5316 and 5317 for rural communities will be $6.1 million and $3.0 million respectively from FFY 2006 through FFY 2006.

Since the State currently administers the Section 5310 program, all areas of the County will be eligible to compete for the estimated $51.1 million that is expected to be apportioned to California from FFY 2006 through FFY 2009.

The public transit-human services transportation plan must also take into consideration the various State and Federal funding sources that support human services transportation. Recent efforts at the federal level have documented 64 Federal programs, sponsored by nine Federal departments, where some type of transportation services is an allowable use of funds.[1]

Coordination of public transit and human services transportation services has long been a topic of discussion at Federal and state levels, as well as within San Bernardino County. Coordinating public transit and human services transportation is seen as way of maximizing the scarce resources available for such service and providing individuals with the particular transportation that they require for getting to work, needed programs or health services. Coordination has been formally defined as:

> *"a process through which representatives of different agencies and client groups work together to achieve any one or all of the following goals: more cost-effective service delivery; increased capacity to serve unmet needs; improved quality of service; and services which are more easily understood and accessed by riders."*[2]

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[1] United We Ride Coordinating Human Service Transportation, Transit ITS Deployment Tracking Progress Report and Preliminary Agency Responses, 2004.

[2] Planning Guidelines for Coordinated State and Local Transportation Services, Federal Transit Administration, December 2000, p. ii.

At the Federal level, the history of formal coordination dialogue began in the late 1970's, rejuvenated in the late 1990's with the formation of the *Interagency Transportation Coordinating Council on Access and Mobility* (CCAM). This established a setting for dialogue with a coalition of the US Departments of Transportation, Health & Human Services, Education, Agriculture, Labor and others.

The 2005 reauthorization of Federal transportation funding under SAFETEA-LU, reflects renewed attention to coordination, specifically in three programs: the Elderly Individuals and Individuals with Disabilities (Section 5310), Jobs Access and Reverse Commute (Section 5316) and the New Freedoms Initiative (Section 5317). Local and regional jurisdictions will be required to develop coordination plans in order to secure access to these, and potentially other, funds. Developing a public transit-human services coordination plan for San Bernardino County's future is the focus of this effort.

B. LOCAL CONDITIONS

1. Approach To Coordination In San Bernardino County

The coordination of public transit and human services transportation in San Bernardino County has focused on several areas since 1990 when a major coordination study was conducted to examine the opportunities and challenges that were unique to the County at that time. That study identified three goals which have formed the basis for transportation coordination initiatives since then, specifically:

- To develop an interacting network of public transit and human services transportation services among the six subareas of the County.
- To develop and implement programs of cooperation, coordination, consolidation and brokerage of functions useful to the transportation services of social service agencies.
- To assist the public operators in responding to the mandates of the Americans with Disabilities Act through establishment of appropriate county-wide policy and the provision of selected countywide participating opportunities in the planning process.

Among the regional and countywide responses to these goals have been the following:

- ***Directory*** -- the annual publication of a public transit-human services transportation directory to enable agencies to identify one another, to support coordination, and to have annually updated access information to the public transportation operators around the county.
- ***PASTACC*** – the regular convening of an advisory body of 35 or so regular members who meet for purposes of mutual education about transportation-related issues that impact these funding and operating agencies and, on occasion, to provide comment to SANBAG and to state entities.
- ***ADA Implementation*** – the initial implementation of the Americans with Disabilities Act was guided by service standards developed by PASTACC; subsequent issues over the past fifteen years have been reviewed and coordinated through PASTACC.
- ***Annual coordination of Section 5310 capital grant program and county unmet transit needs public hearings*** -- largely through PASTACC, San Bernardino has provided outreach and support to individuals and agencies to alert them of the

Section 5310 grant opportunities and to ensure public participation in the annual determination of unmet transportation needs that could reasonably be met.

- ***Non-emergency medical transportation*** – a study of statewide planning significance was completed in 2005 for San Bernardino and Riverside Counties, SANBAG was the lead agency and with PASTACC membership on the Project Management Team. This was a significant initiative, and a beginning effort, to promote coordination between health care partners and the public transportation agencies of San Bernardino County.

2. Issues That Confront San Bernardino County

There are features of San Bernardino County that make coordination particularly challenging. These include ***considerable geographic expanses***, with concentrated employment, regional health and social services facilities in the San Bernardino Valley and county residents traveling long distances from elsewhere in the county to these destinations. Its ***development patterns*** are not conducive to public transportation with disbursed, low-density housing of cities in the San Bernardino Valley and the recently urbanized Victor Valley; similar low-density housing in rural Barstow, the mountain communities including Lake Arrowhead and City of Big Bear Lake, and those of the Morongo Basin including Joshua Tree, Town of Yucca Valley and City of Twentynine Palms. This county is typified by ***challenging demographics***, with the Inland Empire population of San Bernardino and Riverside adding 1.78 million persons between now and 2020, reaching 6 million persons. This is more new residents than will be added in all but seven U.S. states during this same time period.[3] Population impacts of ***traffic congestion*** and significant rates of under-employment currently typify some areas of the county. And while employment for this growing population is now largely out-of-county, there area trends suggesting a stronger employment sector within the Inland Empire, creating more professional level jobs.[3]

San Bernardino County's public transportation services are delivered by seven public transit operators, ***Omnitrans*** in the San Bernardino Valley and the ***Victor Valley Transit Authority*** in the high desert, each operating in urbanized areas. Smaller operators provide public transportation in four sub-regions: ***Barstow Area Transit, the Morongo Basin Transit Authority, Mountain Area Transportation Authority*** and ***Needles Area Transit.*** Very small programs in Big River, Lake Havasu and Trona provide some service for these desert towns. ***Metrolink*** provides high-speed passenger rail service into Los Angeles, Riverside and Orange Counties from San Bernardino's Santa Fe Depot. Currently there are three Metrolink lines serving the San Bernardino Valley. Reverse commute service was recently added and is showing steady ridership increases. Regional passenger rail service is a critical link between this county and the greater Los Angeles metropolitan region. The county's public operators will have a continuing and significant future role in any coordination initiatives developed for San Bernardino County.

Recent activities in San Bernardino County are fostering an improved environment for coordination of public transit and human services transportation. These may be possible to build upon, in terms of establishing coordination strategies for the future. These include:

[3] Inland Empire Quarterly Economic Report, "Inland Empire's Office Market Coming to Life", Vol. 18, No. 1, January 2006.

- The 2003-2004 ***non-emergency medical transportation*** § 5313 planning study that involved partnerships with several of the major health care providers and the county's transportation services. While this study has not yet resulted in significant action within San Bernardino County, the dialogue begun represents a foundational base for future coordination efforts. (Appendix B includes a summary of this study's approach and findings.)
- Various ***health coordination initiatives*** are underway between public health, community hospitals, and significant private sector representatives, potentially affording opportunity to link transportation initiatives to some of these pilot efforts.
- The ***San Bernardino First Five strategic planning efforts*** in the past couple of years involved agency directors in developing comprehensive plans for the distribution of the tobacco revenue settlement funds. Recommendations addressed the need for improved infrastructure and coordination of information among service systems used by children and their families, including transportation.
- A ***coalition of organizations serving homeless persons*** in San Bernardino is moving forward with a one-stop facility where individuals can get access to an array of services at a single location.
- The current sbX planning process for the design and construction of a ***high speed bus service*** in several north-south and east-west San Bernardino Valley corridors has brought together players who have not otherwise considered the mobility issues of San Bernardino residents.
- ***Focused development along transit corridors*** has been underway as a policy of various city and regional planners, encouraging development within defined transit corridors to build densities and trip generators in anticipation of increased transit frequencies.

C. SCOPE OF WORK FOR COORDINATION PLAN

Plan Objectives:

1. To develop a public transit-human services coordination plan to guide the selection of projects for Sections 5310, 5316 and 5317 within and between the six subareas of San Bernardino County for the next 4 years (Fiscal Year 2007/2008 through 2010/2011).
2. To expand stakeholders participation to both a broader group of agencies and a higher level of agency participation.
3. To establish a data collection foundation that builds upon information gathered annually through the public transit-human services transportation inventory and directory publication process.
4. To establish a process that ensures an adopted plan can be implemented using the existing coordination network, represented in-part by PASTACC (redefining it as appropriate) and leveraging funds provided through SAFETEA-LU with other Federal and State human services funds.
5. To provide relevant peer examples of coordination that offer fresh ideas to San Bernardino.

6. To ensure that a proposed plan is consistent with the developing coordination regulatory requirements of SAFETEA-LU.
7. To devise a strategic plan for coordination of public transit and human services transportation: specific elements shall relate to the San Bernardino Valley, the Victor Valley and the four rural subareas of the County, following the flow of transportation and human services dollars to these regions; some countywide elements are envisioned; the overall plan shall be responsive to the particular conditions of San Bernardino County and set forth necessary roles, responsibilities, activities, projects and funding.

Task 1 Establishing a Process to Promote Coordination

The PASTACC [*Public and Specialized Transportation Advisory and Coordination Council*] shall be an initial, but not necessarily exclusive forum for promoting public transit-human services transportation coordination. A methodology for encouraging coordination dialogue, including outreach, shall be developed for the course of the study that meets two purposes:

1. there shall be oversight and guidance provided through the study process by a technical advisory group that shall include members from the proposal selection review process;

2. there shall be effort made to include higher level participation in dialogue about public transit-human services transportation coordination opportunities for San Bernardino, possibly establishing special briefings, high-level workshops or other mechanisms to invite and encourage participation of department heads, agency heads and others who impact the systems issues of San Bernardino County

Where possible, efforts should be made to involve key stakeholders in as many points as reasonable throughout the course of the study. There may be some overlap between this task and Task #4, Focused Public Involvement and Community Outreach.

Product: Technical memo on the coordination process approach.

Task 2 Extending the Inventory of Existing Community Transportation Resources.

We have an extensive and current inventory of community transportation resources, published annually as a directory of both providers and non-providers and includes non-profit, public and for profit entities. Both groups of agencies are the focus of this task: those "providing transportation" and those "serving clients with transportation needs but not providing transportation". Historical AB 120 Social Service inventory data exists for many of the agencies listed in San Bernardino County's Public and Specialized Transportation Directory. Appendix C includes the current survey form used to update directory listings. The **2005/2006 San Bernardino County Directory of Public and Specialized Transportation**, includes 321 organizations, of which 148 agencies are providing, contracting or subsidizing transportation and of which 82 agencies are directly operating approximately 400 vehicles. The county's six local public transit programs operated about 425 vehicles collectively.

Available inventory information should be reviewed with a methodology developed to address the questions enumerated below. The full inventory database will be provided to the successful

consultant. Site visits should be planned for the seven public transit operators and the larger human services transportation providers that are not attached to or connected with the county's public transportation network. For-profit commercial transportation operators, including MediCal providers, shall be included in this inventory process to the extent that these are identified and existing service provision information confirmed. But the focus of this task should be predominately on both the existing public transit systems and the public or private, non-profit agencies providing community-level human services transportation.

2.1 Organizational Issues. Specifically what funding sources are currently supporting transportation within San Bernardino County other than dedicated federal and state transportation dollars? By County subarea: Which organizations are currently providing transportation? Which organizations have an interest and willingness to continue or to broaden their transportation function? Which organizations serve clientele who require the largest numbers of human services transportation trips and users? Which of these organizations are the major stakeholders in public transit and human services transportation? With respect to costs, how are organizations budgeting and funding their services and how effectively are transportation providers capturing or identifying their full costs of providing service?

2.2 Consumer Needs. Questions about the consumers should be addressed, including at minimum, the following by County subarea: What human services transportation needs exist and how can these be categorized in terms of trip purpose, trip length and frequency? What areas of unmet transportation need exist and can be anticipated? What types of special requirements exist so that these trips cannot be made on the existing public transportation network of scheduled fixed-route and rail service within San Bernardino County? To the greatest extent possible, needs should be quantified. Needs should be identified by the subareas of San Bernardino County: San Bernardino Valley, the mountains (Lake Arrowhead to City of Big Bear Lake), Victor Valley, the high desert from Barstow to Needles, and the Morongo Basin (Joshua Tree, Yucca Valley and Twenty-nine Palms).

2.3 State and Federal Funding Streams into San Bernardino County Of the 64 identified Federal level funding streams for which transportation is an allowable expense, identify those utilized in San Bernardino County, and, of those, which may or may not be supporting human services transportation? Which organizations are included or should be added to the inventory? The emphasis on this subtask should be on the larger, more readily identifiable Federal and State funding sources that may be used for human services transportation. This subtask's purpose is not to track every single last one of the 64 programs identified, but to establish the State and Federal human services transportation funding coming into San Bernardino County that can be leveraged with SAFETEA-LU funding (Sections 5310, 5316 and 5317).

2.4 GIS Mapping Activity To the extent possible inventory data shall be presented in GIS formats, to assist with the public transit-human services transportation coordination planning process. Data may be presented for sub-groups or single agencies or selected areas, depending upon what data is obtained and what GIS applications will present the available information. The purpose of this subtask shall be to develop examples specific to San Bernardino County that show the power of geographic information mapping in informing stakeholders about public transit-human services transportation coordination planning issues.

Products: Extended inventory with analysis of inventory, consumer needs and human services transportation funding findings countywide and by subarea, including GIS maps of relevant information.

Task 3 Demographics and Demand

Recognizing that increasing population is one of this County's significant characteristics, various demographic analyses shall be conducted.

3.1 Census Analysis An analysis of 2000 census data shall be prepared by sub area, and by community within sub area, focused on various measures reflective of transit dependency, including age distribution (percentages in various senior categories), vehicle ownership, income levels, ethnicity, single households with children or over 65, percentage with disabilities, population density and any other variables of potential value. This information shall be used in developing strategies by sub-area. Presentation of selected variables in GIS format is desirable.

3.2 Public Transit and Human Services Transportation Demand. A demand projection shall be developed to anticipate public transit and human services transportation demand in each subarea for the next four years. Demand estimates include information about the trend in the current number of public transit trips provided (ACCESS and other demand response services), trips made by human services organizations, and any gaps between current and future public transit-human services trip need. Demand by County subarea should be presented both in terms of raw trip estimates and trips per capita.

Products: A summary of census variables predictive of specialized transit need by subarea; a demand estimation for public transit and human services transportation demand for a four year period; and identification of existing or future service gaps.

Task 4 Identify Coordination Models from Around the Country Applicable to San Bernardino County

Models of public transit and human services transportation coordination activities and coordination structures from elsewhere should be identified. Information about best practices or coordination models should be selected with the realities of San Bernardino County experience in mind. Part of the dilemma that San Bernardino County faces is its considerable size, with the mix of substantial desert, isolated communities and the two urbanized areas with fast-growing populations. The rationale for selecting specific models should be described. Information about selected models should include, but not be limited to, identifying the objective of the program or activity described, identifying the measures of success used in that environment, identifying those variables that appeared to enable the system or organization to succeed. Models selected should focus in two areas:

1) organizational structures that could be considered for the County subareas;

2) specific coordination functions that address needs identified in the County subareas.

SANBAG staff will review and concur on selected models for inclusion in the study. Topics addressed by the models may include, but should not be limited by:

- coordination in similarly sized or expansive rural/ urban areas
- brokerage or mobility-management models appropriate to the County subareas
- use of alternative service models to maximize the resources of public transit and human services transportation providers within and between the County subareas
- expanding the role of volunteers
- trip specific models related to non-emergency medical transportation or adult day care/ adult day health care
- technology applications
- information service applications

Benefits and any outcome measure information of these models or functions should be identified. Costs, weaknesses and special requirements should also be identified.

This product of this task has value as a stand-alone element to be shared with stakeholders to promote and educate persons, helping them see the possibilities and benefits of coordinating public transit and human services transportation.

Product: Report of coordination models depicting structures and functions relevant to each of the County subareas.

Task 5 Focused Public Involvement and Community Outreach

This task is to bring qualitative information that extends and deepens the findings of the inventory process through a focused public outreach effort. It should also be constructed in such a way that it helps to build a network of contacts and agency personnel with related concerns about public transit and human services transportation. The consultant should utilize, as appropriate, the tools set forth in the *Coordination Framework for Action* and planning guidelines of the United We Ride initiatives.

5.1 Agency Head and Opinion Leader Outreach San Bernardino County's First Five dialogue of 2003/2004 established a model for inviting and sustaining the participation of high level persons, including executive directors, agency heads and county department level directors. The consultant team is asked to develop strategies and methods by which to encourage highest level participation in dialogue and discussion by which to identify public transit and human services transportation coordination issues and needs in San Bernardino County. Such outreach shall include public transit providers; private transportation providers, including taxi services and intercity bus operators; humans service agencies funding or supporting transportation programs for targeted populations; and other government agencies that administer health, employment, or other support programs for targeted populations; non-profit organization that serve the targeted populations for transportation services; advocacy organizations working on behalf of targeted populations; security and emergency management agencies; any other appropriate state or local officials; tribes and tribal representatives; representatives of the business community; community-based organizations; economic development agencies; and elected officials.

5.2 Consumer Representation Selected focus group activity should be designed to gather groups that reflect particular market niches for public transit and human services transportation. These shall include, but not be limited to: ***low income persons*** including such groups as single women with children, seniors or the medically indigent

who arrive at emergency rooms for health care; ***individuals with disabilities***, including those who are working or attending school, those who are isolated or shut-in; ***elderly individuals***, including those who live alone, can no longer drive, or are caretaking an aging spouse; ***chronically ill persons*** such as those on dialysis or frail elderly individuals who are living at home.

Focus group discussions can be with consumers directly, or with persons who represent them, such as family members, or those who work with the targeted consumer groups, such as social workers or emergency room workers. The methodology for developing focus group participation should be described, as well as any requirements of the PASTACC membership in assisting the consultant team.

5.3 Public Workshops When the draft report is available, the consultant shall conduct public workshops in the West San Bernardino Valley, East San Bernardino Valley, the Victor Valley and in the four rural subareas (a minimum of seven workshops). The consultant shall work with PASTACC staff to develop the invitation and identify workshop invitees. PASTACC staff can be responsible for the invitation process with the consultant responsible for the design and conduct of the workshops. Participation by SANBAG staff, PASTACC staff and/or PASTACC membership at the workshops is expected.

Products: Stakeholders listing, Report of findings from outreach efforts.

Task 6 Identify and Address Barriers, Duplication of Services and Service Gaps

Draw from the inventory and outreach efforts: the types of issues or problems that constitute barriers to public transit and human service transportation coordination in the six County subareas; identify if any duplication of service exists; and to characterize the gaps in the provision of transportation service.

- ***Barriers*** should encompass both those experienced by individual agencies that keep them from providing their own transportation or working in concert with others to meet mobility needs, but also should identify inter-organizational issues for San Bernardino County agencies that impede progress on public transit and humans services transportation coordination. Identify methods for removing or minimizing perceived and/or real barriers to coordination.
- ***Duplication of service*** may include identifying multiple carriers (both for profit and not-for-profit) that are making similar trips and could conceivably be coordinated in some fashion or arrangements made for service provision in a shared cost manner – for example, specialized transit trips from the Victor Valley or from the mountains region to the medical facilities in the San Bernardino Valley are most problematic. If limited duplication can be identified, this too should be described. Identify coordination actions to eliminate or reduce any duplication of services found.
- ***Service gaps*** should be identified and this can be done geographically, temporally, in terms of types of passenger assistance required and another other means that best describes identified gaps, if in fact these exist. Develop strategies to address identified gaps.

Product: Report on identification and recommended solutions to barriers, service duplication and service gaps.

Task 7 Funding

The consultant shall describe existing and future funding sources, of the greatest breadth possible, for funding future coordination activities for San Bernardino County. Requirements to secure targeted funding shall be identified.

Federal Funding Financial resources to support existing or future coordination of public transit and human services transportation shall be documented. At the time of this writing, while funding marks are generally known for the San Bernardino County regions under SAFTEA-LU programs of New Freedom (§ 5316) and Jobs Access and Reverse Commute (§ 5317), the regulatory guidance for these funds has not yet been completed. Clearly this plan should be constructed to enable San Bernardino County maximize its use of SAFETEA-LU funding directed at supporting public transit and human services transportation coordination.

State Funding California's Transportation Development Act Article 4.5 can be used to support CTSA functions (*consolidated transportation services agency*) functions and is potentially available in some if not all of the County subareas. There are other new and/ or continuing funding initiatives at the state level with relevance to human services transportation that should be identified.

Local Funding At the local level, the voters of San Bernardino County reauthorized the Measure I half-cent sales tax and the twenty-year plan commencing in 2010 continues the exiting Measure I funding but includes a new funding source for coordinated specialized transportation activities in the San Bernardino Valley. Measure I also continues designated funding in the Mountain/Desert subareas for transportation for elderly individuals and individuals with disabilities.

This task should also identify other funding sources currently in use for human services transportation within San Bernardino County, even where these dollars cannot be specifically identified by line item detail from within a larger agency budget, but nonetheless the organization's funding source(s) contributes to operation of a transportation service.

Future Funding Opportunities. Future funding sources to undergird coordinated transportation functions, including local, State and Federal, should be enumerated as well as the requirements of these funding sources, to the degree that these are known. The product of this task should identify what will be necessary to secure these funds.

Product: Report of funding opportunities that can be used to support the public transit and human service transportation coordination effort and any funding requirements, presenting highlights in matrix formats.

Task 8 Draft Strategic Plan and Coordination Strategies

This task utilizes findings from the preceding tasks to build a draft strategic plan for coordination of public transit and human services transportation within and between the various subareas of San Bernardino County. The plan has to accommodate both service needs and financial

opportunities but should not be so constrained by existing resources that a vision cannot be identified. The plan is to be designed with discrete elements focused on the San Bernardino Valley, the Victor Valley and the four rural subareas of the county, reflective of the anticipated flow of SAFETEA-LU funding. There may be selected countywide responsibilities or activities delineated in the plan, as well as those specific to subareas.

The plan should include specific goals to guide short-term and longer-term developments. These goals should be developed for the county as a whole. Short-term objectives shall be identified and these may vary from one subarea to the next.

The strategic plan should describe the organizational arrangements necessary to further the provision of coordinated public transit and human services transportation. It is expected, based upon prior work, that some type of infrastructure is needed to support and encourage the breadth of coordination transportation options possible. The strategic plan should propose a mechanism or structure -- including possible alternative structures -- that are most likely to meet general goals of improving mobility, achieving cost-effectiveness and achieving a sustainable level-of-effort for coordinated public transit and human services transportation in San Bernardino County.

It is important too that the plan provide a prioritization of implementation strategies, assuming that whatever funding levels are secured will not be sufficient to fund all possible projects. Therefore the strategic plan should provide guidance, built up from the study findings from the demand estimation, analysis of existing resources (both physical and financial), addressing methods to remove or minimize barriers, methods to avoid or minimize duplication and address service gaps, on how to prioritize coordination programs, projects and/or initiatives as well as identify the revenues resources required. It is critical that recommended programs, projects and/or initiatives be sustainable over time and not be a one-time award of scarce resources.

Roles and responsibilities should be delineated in relation to proposed objectives and programmatic approaches, at both the countywide and subarea levels. The strategic plan should address short-term, achievable activities as well as provide longer-term direction for continuing planning processes.

The draft strategic plan should be provided in .pdf formats for wide distribution for input and comment. Some paper copies of plan summaries will be necessary for workshop distribution. The schedule should include opportunity to present the draft strategic plan for coordinating public transit and human services transportation in San Bernardino County in at least seven workshop venues within the county, as discussed in Task 5, at PASTACC and including at least one presentation to the SANBAG Plans and Programs committee. Consultant recommendations on the best strategies for obtaining input on the draft strategic plan are requested.

Products: Draft coordination strategic plan, strategies, and proposed projects with opportunities for review.

Task 9 Final Draft of Coordination Strategic Plan and Action Plan

Receiving input from key constituencies on the draft strategic plan, modifications should be made and issues addressed to devise the final strategic plan. The strategic plan should then be translated into an Action Plan, identifying responsible parties, projects and timetables, to the

greatest extent possible. The action plan should provide additional levels of detail in the following areas:

- ***service characteristics directly related to users*** – such as type of service, methods of user activation, assistance on vehicles, reservation times, routes or corridors, hours and service areas, fares
- ***operational system characteristics*** – such as the number of vehicles, communications equipment, and number and type of personnel, including the roles of paid and unpaid staff
- ***administrative features*** – identifying who will manage the services, who will supervise and how the service will be funded

Included with the final report will be an executive summary that has the potential to be a stand-alone document that can be more widely distributed. The final report and all study products shall be provided in .pdf-style formats so that these can be made available on SANBAG's website. Fifty (50) bound documents of the study's final report shall be provided. The final report shall be presented to the SANBAG Plans and Programs Committee as well as the SANBAG Board.

Products: Final coordination strategic plan with stand-alone executive summary; .pdf file of final report; Fifty (50) bound copies of the final report.

D. PROPOSED RFP AND SCOPE OF WORK SCHEDULE

Release of Request for Proposals	August 2, 2006
Requests for Clarifications	August 18, 2006
Response to Requests for Clarifications	August 28, 2006
Proposals Due to SANBAG	By no later than 4:00 p.m. September 8, 2006
Possible Consultant Interviews	September 25, 2006
Recommendation to Award – SANBAG Plans and Programs Committee	October 18, 2006
Recommendation to Award – SANBAG Board	November 1, 2006
Notice to Proceed	November 3, 2006

The study's duration is expected to be no longer than twelve months. Milestones shall be identified by the consultant.

Requests for Clarifications shall be submitted in writing or email format up to the close of business on August 18, 2006. Responses to the Requests for Clarifications shall be posted on the SANBAG web site by the close of day on August 28, 2006.

E. SUBMITTAL OF PROPOSALS

Interested firms are to submit one original and seven (7) copies of their proposal by 4:00 p.m., Friday, September 8, 2006. Proposals shall be addressed as follows:

San Bernardino Associated Governments
Attn: Michael Bair, Director of Transit and Rail Programs
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA. 92410-1715

(909) 884-8276

Proposals shall be comprised of the following:

1. Proposal Transmittal Letter – Not to exceed two pages and identifying the individual responsible for committing the firm.

2. Proposed Scope of Work in Response to the RFP – Scope shall address the firm's understanding of the work to be performed, including identification of specific tasks, timelines and work effort (personnel hours by task). Proposing firms are encouraged to identify opportunities to perform the work in the most cost effective manner.

3. Qualifications of the Firm(s) – Experience of the firm in conducting similar type studies within the past five years. This section should be limited to no more than 15 pages. If subcontractors are to be used, provide brief statements of similar type work performed within the past five years.

4. Qualifications of Proposed Staff – Include a brief resume of proposed staff accompanied with the identification of similar work the proposed staff has participated in within the past five years. The same information should be provided for any subcontractors.

5. Project Management – Provide an explanation of the project management system and practices used to assure that the project is completed within the scheduled timeframe and that the quality of the products will meet SANBAG's requirements.

6. References – Provide at least three references for whom the firms have provided similar work within the past five years. Client contact person name, with address and telephone number are to be provided. References for subcontractors shall also be provided.

7. Cost Proposal – Proposing firms are to prepare a cost proposal that includes a breakdown of expenses by proposed task. The cost proposal shall include all items that will be charged to SANBAG, including travel and other direct charges that will be involved in the project. Costs shall be segregated to show staff hours, rates and classification and administrative overhead. If subcontractors are to be used, the prospective contractor must indicate any mark-up.

E. BUDGET

The SANBAG Board has approved a budget of $150,000 for the development of the Public Transit-Human Services Transportation Coordination Plan for San Bernardino County.

F. CONTRACT TYPE

A cost-reimbursement not-to-exceed type of contract is anticipated. A ten percent retention will be held by SANBAG and released upon the successful completion of the work to be performed. The consultant will be paid based on work actually performed during the preceding month. The consultant should forward monthly invoices by the 15th of the following month. Each invoice shall be accompanied with a brief description of the work performed, identify any problems incurred and include suggested remedies in order to keep the project on schedule. Each invoice shall identify the total contract amount, the amount previously invoiced, the amount of SANBAG retention for that invoice and held to-date, and the remaining balance of the contract.

G. SANBAG CONTACT PERSONS:

Questions related to this RFP should be directed to the following individuals:

Primary Contact:
Michael A. Bair, Director of Transit and Rail Programs
San Bernardino Associated Governments
Phone (909) 884-8276, Ext 116
Fax (909) 885-4407
Email mbair@sanbag.ca.gov

Appendices

Appendix A – Map of San Bernardino County Subareas
Appendix B – Health Access Study Summary of Findings and Recommendations
Appendix C - Survey Form for Annual Survey of Specialized Transportation Providers

APPENDIX B

Health Access in San Bernardino and Riverside Counties: Non-Emergency Medical Transportation (NEMT) Needs and Resources

Caltrans/ Federal Transit Administration S. 5313 Study of Statewide Planning Significance
Winter 2003 to Winter 2005

Project Management Team:
Caltrans, Southern California Association of Governments, San Bernardino Associated Governments, Riverside County Transportation Commission, Inland Empire Health Plan, Kaiser Permanente, Molina Health Care, Health Net, Community Hospital of San Bernardino

Consultant Team:
Judith Norman – Transportation Consultant (JNTC)
In association with:
O'Melia Consulting
Civic Technologies, Inc.
David Raphael- Medical Transportation Consulting
Medical Transportation Management, Inc.
UCLA Center for Health Policy Research
The Fairfax Research Group

Project Development Team:
25+ health care, public transit agencies and community based organizations in Riverside and San Bernardino Counties' Inland Empire

Overall Project Goal:
To identify solutions to non-emergency medical transportation in these two expansive counties, through a regional planning study, by rigorously documenting issues and devising solutions, refined by community input, that are implementable through partnership between the transit and health care industries.

Project Components:

Project Management Team (funding sponsors) and *Project Development Team* (other stakeholders)

Consultant study by JNTC and team

Way-finding maps of medical facilities for bus riders

Conference in March 2005 to report, disseminate findings, engage in dialogue, prepare proceedings.

JNTC Study Objectives:
- Identify NEMT trip needs
- Quantify NEMT need in geographic areas
- Describe available resources and potential barriers
- Devise recommendations to meet geographic area needs with identified resources
- Identify challenges of NEMT geographic areas potentially applicable to other areas of Calif.
- Facilitate continuing education of project stakeholders regarding issues and potential solutions to NEMT.

Study Elements:
- Stakeholder interviews and focus groups
- Resource analysis of transportation services
- Review of state and national NEMT models
- Examination of funding resources and barriers
- Household telephone survey
- Geographic information system (GIS) analysis of multiple data sets.
- Analysis and direction

Four Organizing Questions:

1. Is there currently a need for non-emergency medical transportation to medical appointments for consumers residing within the study areas?
2. If the need exists, what segment of the population is demonstrated to have the greatest need for non-emergency medical transportation in the study areas?
3. Where in the study areas does the target population reside?
4. To what extent does the target population have access to public transit as a transportation alternative to get to medical appointments?

Study process and findings, significantly affected by the *Healthcare Insurance Portability and Accountability Act* (HIPAA), made it premature to develop the anticipated transportation demonstration projects. Importantly, the project has refined our understanding of NEMT issues, to better inform both healthcare and transportation stakeholders. Policy direction to address the needs identified requires continued dialogue by all parties involved, at local and state levels.

Selected Overall Findings:

- ***Population segments have missed medical appts.*** due to lack of transportation, including those with their own transportation and those depending upon others for transportation.
- Demographic characteristics of those missing appts. due to transportation are: ***women, 25 to 34 years of age, household incomes of less than $20,000, MediCal recipients and Spanish speakers***.
- ***Seniors appear to be getting to*** scheduled medical appts., missing or rescheduling fewer medical appts. than other age groups.
- The San Bernardino Valley area surfaced as the destination target area for most medical appointments while the populations missing appointments ***reside primarily in the rural areas of the two counties.***

Healthcare Related Findings:

- State level data suggests that ***California's NEMT policies*** are not on par with those of other states. Program based upon physical ability and not economic need or the availability of transportation alternatives.
- Nationally, ***operating NEMT programs*** continue to rest on the shoulders of healthcare organizations due to Medicaid funding policies.
- Confusion and differences in the interpretation of ***HIPAA requirements*** limited the amount of healthcare related data collected and analyzed in this study.
- Wide variations in the levels and methods of ***reporting NEMT transportation expenses*** in California make it difficult to determine financial resources targeted to transportation by healthcare organizations.
- ***Missed appt. data*** is the most important factor for assessing the severity of NEMT need but is not currently collected by healthcare organizations.
- ***Lack of funding*** is cited by stakeholders as number one barrier to direct NEMT provision.
- ***Perceived success*** of NEMT programs operating across the country relates to ability to focus on the target population and consolidate administration, rather than cost per trip, and to obtain adequate financial resources.
- ***Significant cooperation between healthcare and transit*** is necessary to ensure successful and cost-effective NEMT programs.

Public Transportation Related Findings:

- Access to public transit services for IEHP members is very good. Data shows that IEHP population segments are ***in most cases close to public transit, within ¼ mile walking distance*** from home to a transit stop.
- Although 57% of the total study area population is ***within ¼ mile of fixed-route service***, only 31% of the population lives ***near high frequency routes*** (15 to 30 minute headways).
- Vast majority (93%) of ***IEHP facilities are located within ¼ mile of fixed-route services.*** Nearly half (45%) of IEHP facilities are located within close proximity to high frequency transit routes. These facilities generate demand for 63% of NEMT trips of IEHP cases analyzed.
- ***Dial-a-Ride and ADA-related services*** are operating in each area for eligible seniors and persons with disabilities, but not to those identified as having difficulty getting to appointments, suggesting [CTSA] transportation brokerages as one possible options.
- Public transit connections medical destinations outside the local areas are limited. ***Inter-regional connectivity*** needs significant improvement.

Conclusions:

- The State of California should consider the overall impacts of its current funding policies and practices relative to NEMT.
- The State's policies and practices relative to funding medical transportation under MediCal are inconsistent with other states and contrary to Federal regulation.
- The issue of allowing expenditure of MediCal funding for NEMT for low-income MediCal recipients must be recognized and accepted as a critical core issue in the State's efforts to identify and further local efforts to address NEMT needs.
- Rapidly changing socioeconomic conditions of the Inland Empire do suggest that in-depth "destination-based" information about missed appts. would logically assist transit operators in developing services that better replicate travel patterns of study area participants.
- Destination-type data could be collected as part of ongoing transit data collection efforts to serve as a valuable tool in designing more productive services, based upon demonstrated demand.
- There is no one answer, no one-time answer; each recommended action serves to support the overall objective addressing NEMT needs.

APPENDIX C

[Page one of a two page survey with second page collecting vehicle inventory information.]

SAN BERNARDINO SPECIALIZED TRANSPORTATION

Summer 2005

Contact _____ **Agency Name:**

Title: _____

E-mail: _____

Phone/Ext: _____

Fax: _____

1. **Please give us a couple of sentences about your program, the services provided and the client population you serve in terms of age, disability or other special characteristics. You may write it here or attach a brochure or flyer.**

2. YOUR AGENCY TYPE *(please check one only):*

- ☐ Private, for profit
- ☐ Private, non-profit
- ☐ Public Agency
- ☐ Church affiliated
- ☐ Tribal organization

3. NUMBER OF ACTIVE CLIENTS ON YOUR AGENCY'S ROSTER LIVING WITHIN SAN BERNARDINO CO.:

_____ # total enrolled clients / consumers
_____ # average daily attendance
_____ site daily who require transportation assistance
_____ # est. in wheelchairs daily

4. WHICH BEST DESCRIBES ANY TRANSPORTATION SERVICE PROVIDE BY YOUR AGENCY:
(please check all that apply):

- ☐ NO TRANSPORTATION provided, purchased, or arranged.
- ☐ PROVIDING transportation with full responsibility for the transportation by this agency.
  - ☐ Vehicles owned/leased with paid drivers
  - ☐ Vehicles owned/leased with volunteer drivers
  - ☐ Privately owned vehicles with paid drivers
  - ☐ Privately owned vehicles with volunteer drivers
- ☐ CONTRACTING for transportation with services provided by another entity under contract to this agency.
- ☐ SUBSIDIZING transportation through agency purchase of passes, fares or mileage reimbursement.
- ☐ ARRANGE FOR transportation by assisting with information but clients responsible for follow-up.
- ☐ Other, please specify:

If you answered NO TRANSPORTATION to #4, please stop here and return the survey form in the enclosed envelope. Otherwise, please continue. Thank you very much.

5. TRANSPORTATION SERVICES ARE PROVIDED TO:
(please check one only):

- ☐ Any person served by agency
- ☐ Only to formally enrolled agency clients
- ☐ Clients authorized/approved for purchased transportation
- ☐ General Public
- ☐ Other, please specify _____

6. TRANSPORTATION SERVICE AREA:

- ☐ Throughout San Bernardino County

Please describe service area, listing cities, if appropriate

- ☐ Within a _____ radius of _____

7. DAYS AND HOURS OF OPERATION:

Operating Hours	First Pick-up	Last Pick-up
Weekdays:		
Saturdays:		
Sundays:		

8. HOW MANY VEHICLES DO YOU HAVE FOR CLIENT TRANSPORTATION? _____

9. HOW ARE TRIPS REQUESTED? *(please check all that apply)*

- ☐ Immediate request/ same day
- ☐ 24 hour advance reservation
- ☐ Up to one week advance reservation
- ☐ More than one week advance reservation

10. CURRENT YEAR TRANSPORTATION BUDGET:

What is your agency's estimated annual transportation expenditure for the current fiscal year: administrations, operations, and vehicle costs

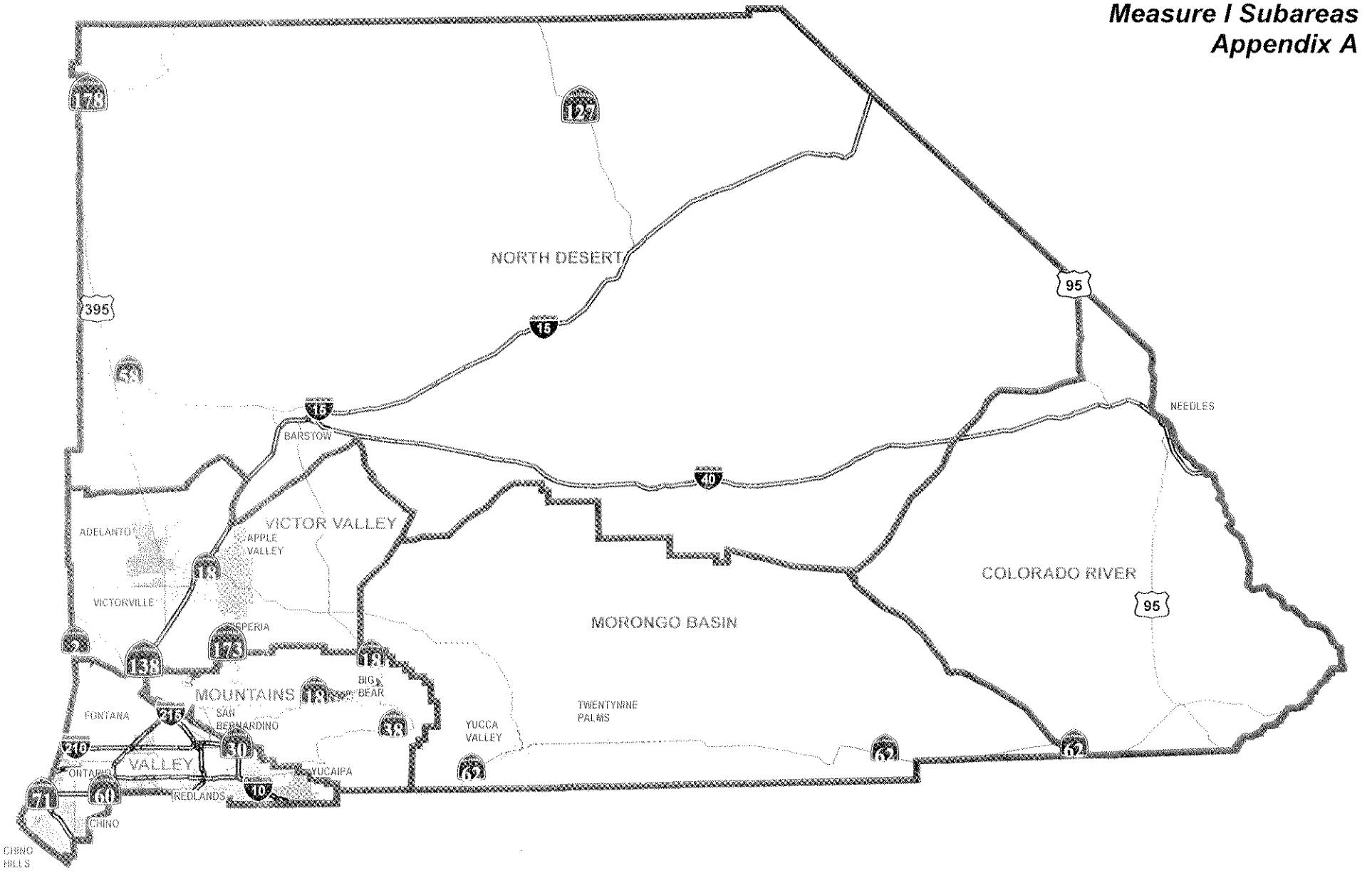
_____ current FY trans. administration budget:

_____ current FY trans. operating budget:

_____ current FY vehicle / capital budget:

PLEASE RETURN TO: SANBAG Directory, c/o AMMA, 306 Lee Ave., Claremont, CA 91711-3123
Voice (909) 621-3101 Fax (909)6219387 E-Mail: amma306@earthlink.net

San Bernardino County
Measure I Subareas
Appendix A



Governments SANBAG Working Together

San Bernardino Associated Governments

1170 W. 3rd Street, 2nd Floor San Bernardino, CA 92410-1715
Phone: (909) 884-8276 Fax: (909) 885-4407 Web: www.sanbag.ca.gov

TRANSPORTATION MEASURE I

■ San Bernardino County Transportation Commission ■ San Bernardino County Transportation Authority
■ San Bernardino County Congestion Management Agency ■ Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 4

Date: July 19, 2006

Subject: Presentation of the Results of the Transportation Development Act (TDA) Triennial Performance Audits for the Cities of Barstow and Needles, Mountain Area Regional Transit Authority, Morongo Basin Transit Authority, Omnitrans and Victor Valley Transit Authority

Recommendation:* Receive results of the TDA Triennial Performance Audits for the Cities of Barstow and Needles, Mountain Area Regional Transit Authority, Morongo Basin Transit Authority, Omnitrans and Victor Valley Transit Authority.

Background: In October 2005 the Board approved the award of Contract 06-012 for conducting the TDA Triennial Performance Audit of the County Transportation Commission and the six transit operators/claimants in the County to the firm of Arthur Bauer and Associates with Pacific Municipal Consultants and Patti Post and Associates. These audits are conducted pursuant to Section 99246 of the California Public Utilities Code. The performance audits of all six transit operators/claimants have been completed and either have been or will be presented to their respective governing boards. The audit of the Commission has not yet been completed, but is expected to be presented to the Administrative Committee in August.

Mr. Derek Wong of Pacific Municipal Consultants will be presenting an overview of the transit performance audit process, and for each transit agency, the major audit findings and recommendations.

*

Approved
Plans and Programs Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

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50207000

On July 5, 2006, the Board approved an amendment to Contract 06-012 for additional Phase II audit work involving the development of a cost allocation methodology that will allow Omnitrans to charge direct and indirect expenses associated with federal grant management and allocating operating expenses between the various types of transit services either provided directly or under contract.

Financial Impact: The majority of this work was completed under the prior year task 0650205.

Reviewed By: This item will be reviewed by the Plans and Programs Committee on July 19, 2006. The transit operator/claimant performance audits have been reviewed by the respective transit agency management and either have been or will be reviewed by their governing boards.

Responsible Staff: Michael Bair, Director of Transit and Rail Programs

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TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 5

Date: July 19, 2006

Subject: Award of Construction Contract 06-056 for Construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 2

Recommendation:* Authorize staff to proceed directly to Board for award of Construction Contract 06-056 for San Bernardino Valley Coordinated Traffic Signal System Program – Tier 2

Background: **This action is in anticipation of a new construction contract.** The San Bernardino Valley Coordinated Traffic Signal System Program – Tier 2 (Tier 2) is currently out to bid with bids scheduled to open the afternoon of July 25, 2006. This is the second of two separate signal coordination projects that will be awarded over the next month. Tier 2 generally entails the interconnect and coordination of 294 signals along major arterials and associated freeway interchanges in the San Bernardino County valley region (refer to attached figure for signal locations). The work comprises the installation of traffic signal interconnect systems, modifying traffic signals, installing one traffic signal, connecting traffic signals to existing communication systems, and appurtenant work at various signal locations in the program. The engineer's construction cost estimate for Tier 1 is approximately $1.8 million.

The recent low bid for the Tier 1 project was 27% above the engineer's estimate. Proceeding directly to the Board meeting following the respective bid opening will allow us to obligate the funds necessary to fully fund this construction contract before the end of the federal fiscal year, which will expedite our ability to issue a notice to proceed to the contractor to start construction activities and

*

Approved

Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

ppc0607d-abz
70107000

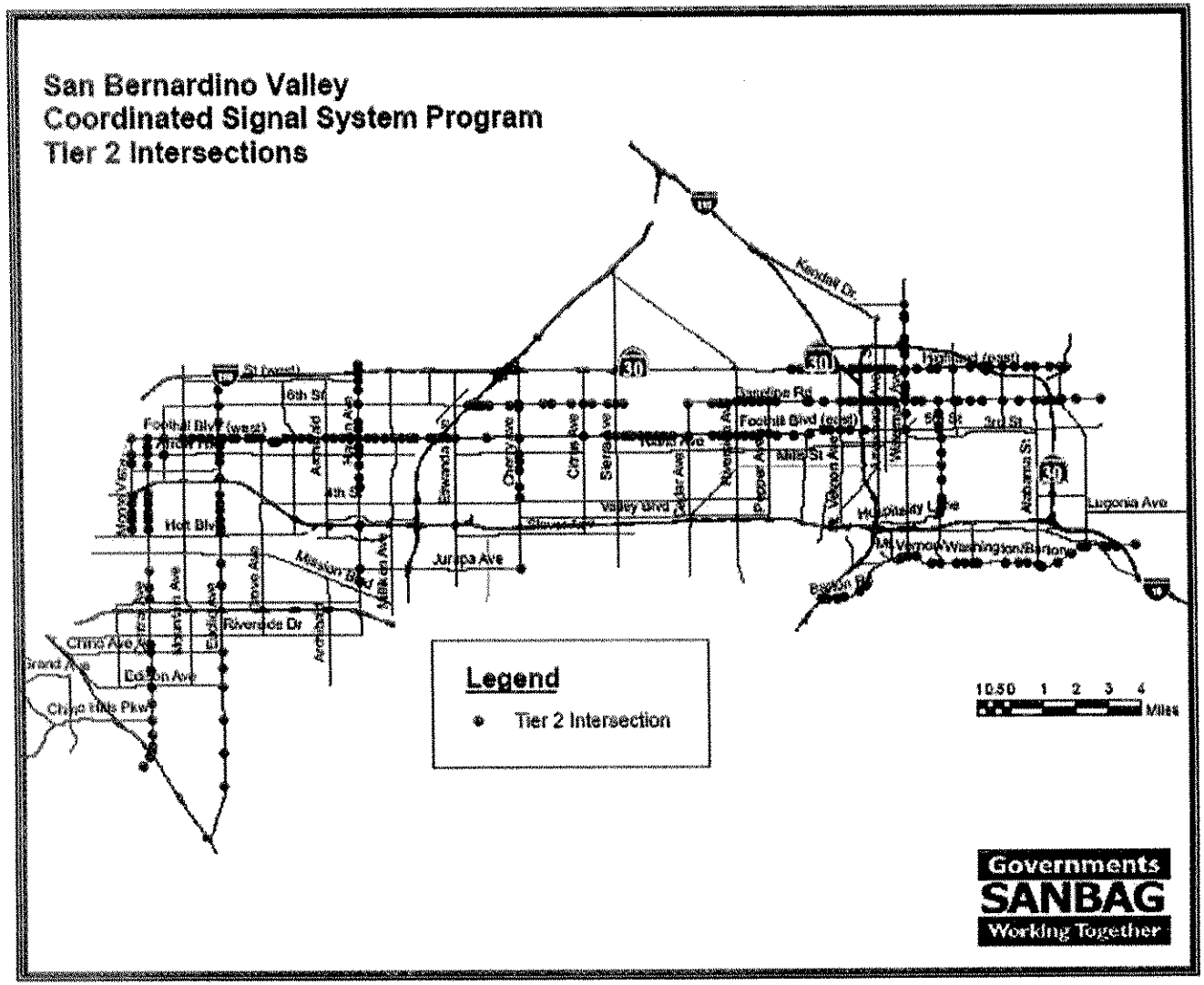
mobilize contract forces. State contracting law mandates that the lowest responsible and responsive bidder be awarded the contract. This takes most, if not all, of the discretion from the contract award process.

Financial Impact: This item has no impact on the FY 2006/07 Budget. TN 70107000.

Reviewed By: This item will be reviewed by the Plans and Programs Policy Committee on July 19, 2006.

Responsible Staff: Andrea Zureick, Senior Transportation Analyst
Ty Schuiling, Director of Freeway Construction

ppc0607d-abz
70107000


San Bernardino Valley
Coordinated Signal System Program
Tier 2 Intersections
Legend
Tier 2 Intersection
0 0.5 1 2 3 4
Miles
Governments
SANBAG
Working Together

Governments SANBAG Working Together

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TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 6

Date: July 19, 2006

Subject: Award of Contract No. 06-055 for Construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1

Recommendation:* 1. Approve Contract No. 06-055 with Steiny and Company, Inc. for construction of San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1 in the amount of $1,694,853, as detailed in the Financial Impact Section.

2. Approve amendment to increase Task No. 70107000, Valley Signal Coordination Program, in the amount of $617,753 to be funded by Congestion Mitigation and Air Quality funds set aside for the Valley Signal Coordination Program, as detailed in the Financial Impact Section.

Background: **This is a new contract awarded based on the competitive low bid process, as such conflict of interest is not applicable.** SANBAG opened bids for Tier 1 of the San Bernardino Valley Coordinated Traffic Signal System Program June 11, 2006. Tier 1 generally entails the coordination of approximately 300 signals on arterials parallel to and connecting to the I-10 and SR-60 freeways in the valley region of San Bernardino County (refer to attached figure for signal locations). The work comprises the installation of traffic signal interconnect systems, connecting various traffic signals to existing fiber optic systems, and appurtenant work at various signal locations in the program. The engineer's construction cost estimate for Tier 1 is approximately $1.2 million. The Tier 1 project is estimated at $1.3 million when supplemental items and 10% contingency are added to the base engineer's estimate.

*

Approved
Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

ppc0607c-abz
Attachments: A06055, A06055CSS
70107000

SANBAG received three bids for the Tier 1 project. The three bidders were:

Steiny and Company	$1,537,866
Terno, Inc.	$1,739,089
Republic Electric	$1,777,200

The low bid submitted by Steiny and Company is approximately 27% higher than the engineer's estimate. The low bid is not inclusive of supplemental items and contingency costs. The total award amount of $1,694,853 includes the bid items, supplemental items, and contingency funds. A breakdown of these costs is included as an attachment to contract 06-055. Staff has reviewed the low bid and has concluded that the bid is responsive and Steiny and Company is a responsible contractor.

Financial Impact: The financial impact of this item is $1,694,853, which is not consistent with the 2006/07 SANBAG Budget.

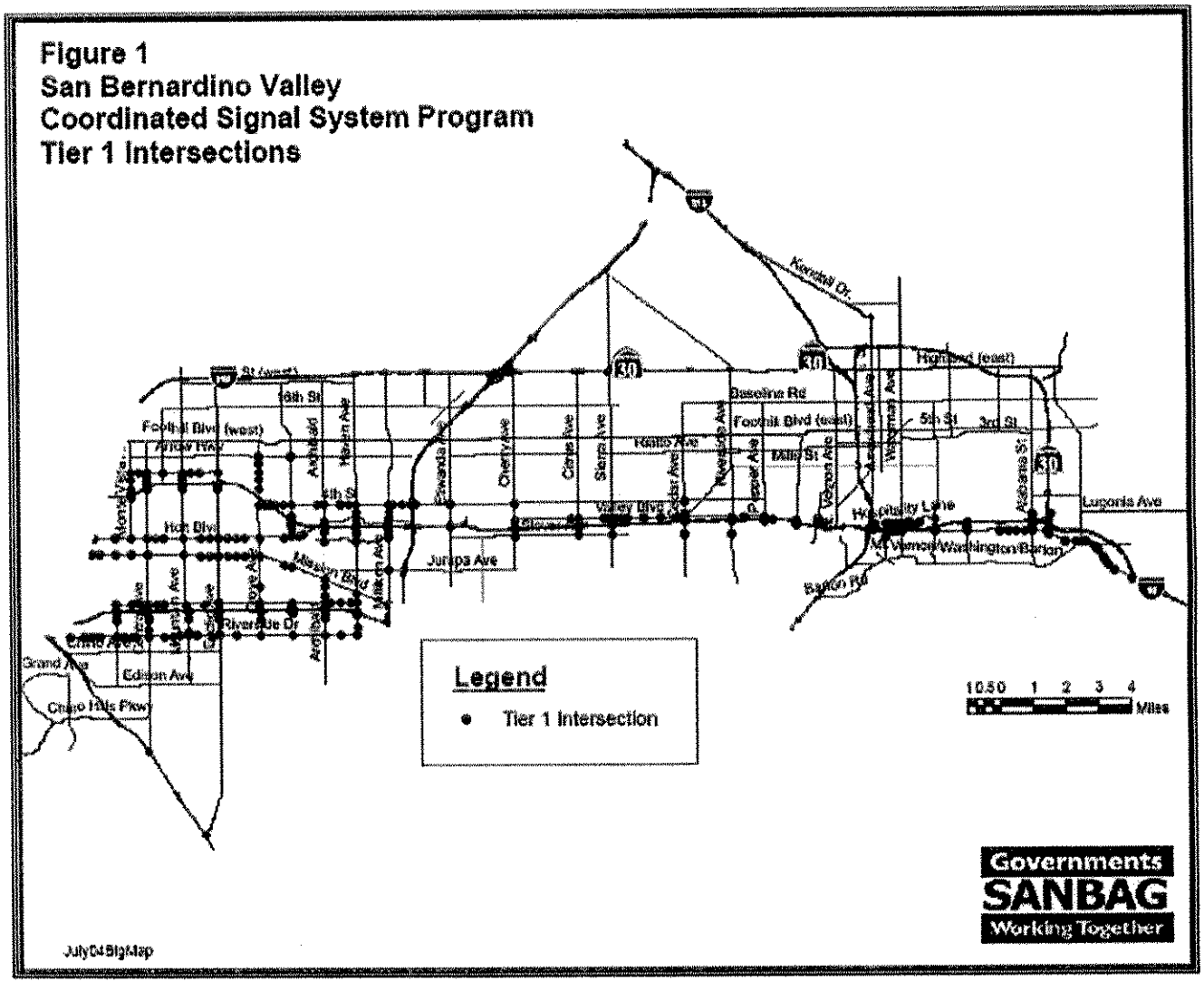
A budget amendment is requested to increase the amount of Task No. 70107000, Valley Signal Coordination Program, by $617,753. This will be funded by Congestion Mitigation and Air Quality (CMAQ) funds set aside for the Valley Signal Coordination Program. It should be noted that Caltrans is in the process of preparing a contribution agreement for the contribution of $1.5M in SHOPP funds for the construction of Tiers 1 and 2, which will eventually allow replacement of some CMAQ funds on these projects. TN 7010700, 701C6055

Reviewed By: This item has been submitted for review by Counsel. This item will be reviewed by the Plans and Programs Policy Committee on July 19, 2006.

Responsible Staff: Andrea Zureick, Senior Transportation Analyst
Ty Schuiling, Director of Planning and Programming

ppc0607c-abz
Attachments: A06055, A06055CSS
70107000

Figure 1
San Bernardino Valley
Coordinated Signal System Program
Tier 1 Intersections



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Attachments: A06055, A06055CSS
70107000

San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1

Steiny and Company, Inc.	$1,537,866
Contingeny (10%)	$153,787
Trainees	$3,200
Estimated Project Total	**$1,694,853**

SANBAG Contract No. 06-055

by and between

San Bernardino Associated Governments

and

Steiny and Company, Inc.

for

San Bernardino Valley Coordinated Traffic Signal System Program – Tier 1

FOR ACCOUNTING PURPOSES ONLY			
☒ Payable ☐ Receivable	Vendor Contract # _____ Vendor ID _____	Retention: ☒ Yes 10 % ☐ No	☒ Original ☐ Amendment

Notes:

Original Contract:	$ 1,537,866	Previous Amendments Total:	$ _____
		Previous Amendments Contingency Total:	$ _____
Contingency Amount:	$ 156,987	Current Amendment:	$ _____
		Current Amendment Contingency:	$ _____

Contingency Amount requires specific authorization by Task Manager prior to release.

Contract TOTAL → $ **1,694,853**

↓ Please include funding allocation for the original contract or the amendment.

Task	Cost Code	Funding Sources	Grant ID	Amounts
701C6055	6010	CMAQ	0255	$ 1,694,853
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____

Original Board Approved Contract Date: 8/2/06 Contract Start: 8/14/06 Contract End: 3/14/08

New Amend. Approval (Board) Date: _____ Amend. Start: _____ Amend. End: _____

If this is a multi-year contract/amendment, please allocate budget authority among approved budget authority and future fiscal year(s)-unbudgeted obligations:

Approved Budget Authority →	Fiscal Year: 06/07 $ 1,194,853	**Future Fiscal Year(s) – Unbudgeted Obligation →**	$ 500,000

Is this consistent with the adopted budget? ☐Yes ☒No

If yes, which Task includes budget authority? _____

If no, has the budget amendment been submitted? ☒Yes ☐No

CONTRACT MANAGEMENT

Please mark an "X" next to all that apply:

☐ Intergovernmental ☒ Private ☐ Non-Local ☐ Local ☐ Partly Local

Disadvantaged Business Enterprise: ☒No ☐Yes _____%

Task Manager: **Ty Schuiling**

Contract Manager: **Andrea Zureick**

_____ Task Manager Signature Date

Andrea Zureick 7/13/06
Contract Manager Signature Date

_____ Chief Financial Officer Signature Date

Filename: A06055CSS

Form 28 06/06

SAN BERNARDINO ASSOCIATED GOVERNMENTS
San Bernardino Valley
Coordinated Traffic Signal System – Tier 1
In San Bernardino County
Contract No.: 06-055
Bid Opening: July 11, 2006

THIS AGREEMENT, made and concluded, in duplicate, August 2, 2006 between the San Bernardino Associated Governments (referred to hereinafter as "SANBAG"), and

Steiny and Company, Inc. (refered to hereinafter as "Contractor").

ARTICLE I.---WITNESSETH, That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by SANBAG, and under the conditions expressed in the Performance Bond and Payment Bond, bearing even date with these present, and hereunto annexed, the said Contractor agrees with SANBAG, at the Contractor's own proper cost and expense, to do all the work and furnish all the materials, except such as are mentioned in the specifications to be furnished by SANBAG, necessary to construct and complete in a good, workmanlike and substantial manner and to the satisfaction of SANBAG, the work described in the special provisions and the project plans described below, including any addenda thereto, and also in accordance with California Department of Transportation Standard Plans, dated July 2004, and safety related portions, dated July 2004, the Standard Specifications, dated July 1999, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, which said special provisions, project plans, Standard Plans, Standard Specifications, and Labor Surcharge and Equipment Rental Rates are hereby specially referred to and by such reference made a part hereof.

The Project Plans dated February 21, 2006 (Coordinated Traffic Signal System – Tier 1) and Special Provisions dated June 2, 2006 for the work to be done are entitled

INSTALLATION OF TRAFFIC SIGNAL INTERCONNECT
San Bernardino Valley
COORDINATED TRAFFIC SIGNAL SYSTEM – TIER 1
In San Bernardino County

ARTICLE II.---SANBAG hereby promises and agrees with the said Contractor to employ, and does hereby employ, the said Contractor to provide materials to do the work according to the terms and conditions herein contained and referred to, for the prices hereinafter set forth, and hereby contracts to pay the same at the time, in the manner and upon the conditions herein set forth; and the said parties for themselves, their heirs, executors, administrators, successors and assigns, do hereby agree to the full performance of the covenants herein contained.

ARTICLE III.---The State general prevailing wage rates most current edition at the date of the bid opening are hereby made a part of this contract. It is further expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid or proposal of said Contractor, then this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said proposal conflicting herewith.

ARTICLE IV.---By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

ARTICLE V.--- Contractor agrees to receive and accept the following prices as full compensation for (1) furnishing all materials and for doing all the work contemplated and embraced in this agreement; (2) all loss or damage, arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by SANBAG, and for all risks of every description connected with the work; (3) all expenses incurred by or in consequence of the suspension or discontinuance of work and (4) well and faithfully completing the work, and the whole thereof, in the manner and according to the plans and specifications, and the requirements of the Engineer under them, to wit:

BID LIST

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
1.	Traffic Control		1	LS	35,000.00	35,000.00
City of Chino						
2.	Install Wireless Ethernet System, Replace Controller Unit (Philadelphia/Ramona)	3	1	LS	10,000.00	10,000.00
3.	Install Wireless Ethernet System, Modify Controller (Philadelphia/Monte Vista)	3	1	LS	11,000.00	11,000.00
4.	Install Wireless Ethernet System, Modify Controller (Philadelphia/Telephone)	4	1	LS	9,000.00	9,000.00
5.	Install Wireless Ethernet System & 19.2 Baud Modem (Philadelphia/Central)	4	1	LS	5,000.00	5,000.00
6.	Install Wireless Ethernet System, Replace Controller Unit, Install Telemetry (Philadelphia/Benson)	5	1	LS	10,000.00	10,000.00
7.	Install Econolite Master Controller and Telemetry at Chino City Hall	6	1	LS	7,000.00	7,000.00
8.	Install Spread Spectrum System, Upgrade ASC Program, Install Telemetry (Riverside/Ramona)	6	1	LS	10,000.00	10,000.00
9.	Replace Controller Unit, Install Telemetry (Riverside/Yorba)	7	1	LS	6,000.00	6,000.00
10.	Install Spread Spectrum System, Upgrade ASC Program, Install Telemetry & 19.2 Baud Modem (Riverside/Mountain)	8	1	LS	9,000.00	9,000.00
11.	Install Spread Spectrum System, Upgrade ASC Program, Install Telemetry (Riverside/Cypress)	8	1	LS	8,000.00	8,000.00
City of Colton						
12.	Install Spread Spectrum System, Replace Controller Unit (Valley/Wildrose)	10	1	LS	8,000.00	8,000.00
13.	Install Spread Spectrum System (Valley/Pepper)	10	1	LS	5,000.00	5,000.00
14.	Install Spread Spectrum System, Replace Controller Unit (Valley/Rancho)	10	1	LS	9,000.00	9,000.00
15.	Install Spread Spectrum System (Valley/3rd)	10	1	LS	5,000.00	5,000.00
16.	Install Spread Spectrum System & Telephone Service, Remove Microwave Antenna (Valley/La Cadena)	10	1	LS	12,000.00	12,000.00
17.	Install Spread Spectrum System, Remove Microwave Antenna & Interface Unit (Valley/9th)	10	1	LS	5,000.00	5,000.00
18.	Replace Controller Unit and install modem (La Cadena/G)	10	1	LS	4,000.00	4,000.00
City of Loma Linda						
19.	Install Telephone Service & Model 170E Master (Mountain View/Business Center)	12	1	LS	15,000.00	15,000.00
20.	Install Model 400 Modem/C2 Connector (Mountain View/Redlands)	12	1	LS	1,000.00	1,000.00
City of Montclair						
21.	Install Time Source Receiver/Antenna at Montclair City Hall	14	1	LS	4,000.00	4,000.00
22.	Replace Controller Assembly (Central/Arrow)	14	1	LS	12,000.00	12,000.00

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
23.	Install Spread Spectrum System (Central/Holt)	15	1	LS	5,000.00	5,000.00
24.	Install Spread Spectrum System (Mission/Ramona)	15	1	LS	4,000.00	4,000.00
City of Rancho Cucamonga						
25.	Replace Controller Unit, Install Telemetry, Connect SIC (4th/Golden Oak)	17	1	LS	33,000.00	33,000.00
26.	Install Spread Spectrum System, Replace Controller Assembly, Connect SIC (4th/Archibald)	17	1	LS	40,000.00	40,000.00
27.	Install Spread Spectrum System (4th/Turner/Hermosa)	17	1	LS	6,000.00	6,000.00
28.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Grove/Arrow)	18	1	LS	40,000.00	40,000.00
29.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Grove/9th)	18	1	LS	40,000.00	40,000.00
30.	Install Spread Spectrum System, Replace Econolite Master (Arrow Route/Vineyard)	18	1	LS	12,000.00	12,000.00
City of Redlands						
31.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/California)	20	1	LS	10,000.00	10,000.00
32.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/New Jersey)	20	1	LS	9,000.00	9,000.00
33.	Replace Controller Unit, Install Telemetry (Redlands/Nevada)	20	1	LS	4,000.00	4,000.00
34.	Replace Controller Unit, Install Telemetry (Redlands/Iowa)	20	1	LS	4,000.00	4,000.00
35.	Install Spread Spectrum System, Telephone Service & Telemetry, Replace Local/Master Controller Unit (Redlands/Alabama)	20	1	LS	18,000.00	18,000.00
36.	Replace Controller Unit, Install Telemetry (Alabama/Industrial Park)	20	1	LS	5,000.00	5,000.00
37.	Replace Controller Unit, Install Telemetry (Alabama/Lugonia)	20	1	LS	5,000.00	5,000.00
38.	Install 12 Pair #20 SIC (Alabama/Redlands-I-10 W/B)	20	2,000	LF	3.10	6,200.00
39.	Replace Controller Unit, Install Telemetry (Colton/Industrial Park)	21	1	LS	5,000.00	5,000.00
40.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Tennessee/Lugonia)	21	1	LS	9,000.00	9,000.00
41.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Tennessee/Colton)	21	1	LS	10,000.00	10,000.00
42.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/Tennessee)	21	1	LS	12,000.00	12,000.00
43.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/Texas)	22	1	LS	10,000.00	10,000.00
44.	Replace Controller Unit, Install Telemetry (Redlands/Eureka)	22	1	LS	4,000.00	4,000.00
45.	Install Spread Spectrum System (Redlands/3rd)	22	1	LS	6,000.00	6,000.00
46.	Replace Controller Unit, Install Telemetry (Redlands/Orange)	22	1	LS	8,000.00	8,000.00
47.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/6th)	22	1	LS	10,000.00	10,000.00
48.	Install Spread Spectrum System, Telephone Service, Eagle Local/Master Controller Unit & Telemetry (Redlands/Citrus)	23	1	LS	23,000.00	23,000.00

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
49.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/Fern)	23	1	LS	9,000.00	9,000.00
50.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/Cypress)	24	1	LS	9,000.00	9,000.00
51.	Replace Controller Unit, Install Telemetry (Redlands/Shopping Center)	24	1	LS	5,000.00	5,000.00
52.	Replace Controller Unit, Install Telemetry (Redlands/Palm)	24	1	LS	5,000.00	5,000.00
53.	Install Spread Spectrum System, Replace Controller Unit, Install Telemetry (Redlands/Highland)	24	1	LS	9,000.00	9,000.00
City of Rialto						
54.	Install Spread Spectrum System (Riverside/Slover and Riverside/Gateway)	26	1	LS	8,000.00	8,000.00
City of San Bernardino						
55.	Install Spread Spectrum System, Replace Controller Unit (Hospitality/E)	28	1	LS	9,000.00	9,000.00
56.	Install Spread Spectrum System, Replace Controller Unit (Hospitality/Commercenter E)	28	1	LS	9,000.00	9,000.00
57.	Install Spread Spectrum System (Waterman/Hospitality)	28	1	LS	6,000.00	6,000.00
58.	Replace Controller Unit (Hospitality/Circuit City)	28	1	LS	4,000.00	4,000.00
59.	Replace Local & Master Controller Units, Install Short Haul Modems (Hospitality/Home Depot)	28	1	LS	10,000.00	10,000.00
60.	Replace Controller Unit (Hospitality/Harriman)	28	1	LS	4,000.00	4,000.00
61.	Replace Local & Master Controller Units (Waterman/Redlands)	28	1	LS	9,000.00	9,000.00
62.	Install 12-Pair #20 SIC (Redlands/Waterman/Hospitality)	28, 47	3,200	LF	5.20	16,640.00
63.	Replace Controller Unit (Hospitality/Hunts)	29	1	LS	4,000.00	4,000.00
64.	Install Spread Spectrum System, Replace Controller Unit (Hospitality/Commercenter W)	29	1	LS	12,000.00	12,000.00
65.	Replace Controller Unit, Install 1.5" Interconnect Conduit & 6-Pair #22 SIC (Redlands/Club)	30	1	LS	20,000.00	20,000.00
66.	Replace Controller Unit (Redlands/Hunts)	30	1	LS	4,000.00	4,000.00
67.	Replace Controller Unit (Hunts/Club Center)	30	1	LS	4,000.00	4,000.00
County of San Bernardino						
68.	Install Spread Spectrum System (Mission/Roswell)	32	1	LS	500.00	500.00
69.	Install Spread Spectrum System, Replace Controller Assembly (Mission/Pipeline)	32	1	LS	13,000.00	13,000.00
70.	Install Spread Spectrum System, Replace Controller Assembly (Mission/Monte Vista)	33	1	LS	7,000.00	7,000.00
71.	Install Spread Spectrum System, Replace Controller Unit (Mission/Central)	33	1	LS	14,000.00	14,000.00
72.	Install Spread Spectrum System, Modify Controller (Riverside/Reservoir)	34	1	LS	10,000.00	10,000.00
73.	Install Spread Spectrum System, Modify Controller (Riverside/East End)	34	1	LS	10,000.00	10,000.00

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
74.	Install Spread Spectrum System, Replace Controller Unit (Riverside/Roswell)	35	1	LS	26,000.00	26,000.00
75.	Install Spread Spectrum System, Replace Controller Assembly (Riverside/Pipeline)	35	1	LS	29,000.00	29,000.00
76.	Install 19.2 Baud Modem/Telemetry Module (4th/San Bernardino/ Etiwanda)	36	1	LS	850.00	850.00
77	Install 19.2 Baud Modem/Telemetry Module (San Bernardino/Transportation)	36	1	LS	850.00	850.00
78.	Install Spread Spectrum System (San Bernardino/Kaiser)	36	1	LS	2,000.00	2,000.00
79.	Install 19.2 Baud Modem/Telemetry Module (Valley/Etiwanda)	36	1	LS	850.00	850.00
80.	Install 19.2 Baud Modem/Telemetry Module (Valley/Logistics)	36	1	LS	~~850.00~~	~~850.00~~
81.	Install Spread Spectrum System (Valley/Nexus)	36	1	LS	~~6,000.00~~	~~6,000.00~~
82.	Install Spread Spectrum System, Replace Controller Unit, Install Econolite Master, Telemetry & Telephone Service (Valley/Calabash)	36	1	LS	~~38,000.00~~	~~38,000.00~~
83.	Install Spread Spectrum System (San Bernardino/ Commerce)	37	1	LS	~~5,000.00~~	~~5,000.00~~
84.	Install Spread Spectrum System, Replace Controller Assembly, Install Econolite Master, Telemetry & Telephone Service (San Bernardino/Cherry)	37	1	LS	45,000.00	45,000.00
85.	Install 19.2 Baud Modem/Telemetry Module (Valley/Bel-Air Pedestrian Signal)	38	1	LS	9,000.00	9,000.00
86.	Install Spread Spectrum System (Valley/Alder)	38	1	LS	6,000.00	6,000.00
87.	Install Spread Spectrum System/Econolite Master/Telemetry (Valley/Locust)	38	1	LS	11,000.00	11,000.00
88.	Install Spread Spectrum System (Valley/Linden)	38	1	LS	6,000.00	6,000.00
89.	Modify Spread Spectrum System, Replace Controller Unit & Dial-up Modem, Install Econolite Master & Telemetry (Cedar/San Bernardino)	39	1	LS	35,000.00	35,000.00
90.	Remove Spread Spectrum System, Replace Controller Unit, Install Telemetry & Modem (Cedar/Bloomington)	39	1	LS	2,000.00	2,000.00
91.	Install 1.5" Interconnect Conduit (Cedar S. of Bloomington)	39	280	LF	32.50	9,100.00
92.	Install 12-Pair #19 SIC (Cedar, Bloomington to Valley)	39	700	LF	4.15	2905.00
93.	Modify Spread Spectrum System, Replace Controller Unit, Install Telemetry & Modem (Cedar/Valley)	39	1	LS	6,000.00	6,000.00
94.	Modify Spread Spectrum System, Replace Controller Unit, Install Telemetry & Modem (Cedar/Slover)	39	1	LS	6,000.00	6,000.00
95.	Replace Controller Unit, Install Telemetry & Modem (Cedar/Orange)	39	1	LS	1,350.00	1,350.00
Caltrans						
96.	Modify Traffic Signal (Route 10 W/B Ramps/Monte Vista)	41	1	LS	24,000.00	24,000.00
97.	Modify Traffic Signal (Route 10 E/B Ramps/Central)	42	1	LS	19,000.00	19,000.00
98.	Install 12-Pair #19 SIC (Central/Costco to Montclair Plaza)	42	1500	LF	3.50	5,250.00
99.	Modify Traffic Signal (Route 10 E/B Ramps/Mountain)	43	1	LS	14,000.00	14,000.00

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
100.	Modify Traffic Signal, Including Interconnect Conduit & Cable to 6th St (Route 10 E/B Ramps/Euclid)	43	1	LS	23,000.00	23,000.00
101.	Modify Traffic Signal (Route 10 E/B & W/B Ramps/4th)	44, 45	1	LS	81,000.00	81,000.00
102.	Modify Traffic Signal (Route 10 W/B Ramps/Vineyard)	46	1	LS	1,500.00	1,500.00
103.	Install ~~Fiber Optic Modem~~ Ethernet Fiber Switch & Serial Converter (Route 10 at Milliken, Etiwanda & Sierra)	46	~~3~~ 3	EA	9,000.00	27,000.00
103a	Install Airlink Wireless Modem	46, 48, 50	18	EA	1,500.00	27,000.00
103b.	Install Model 170E Master Controller Unit	46, 48	10	EA	200.00	2,000.00
103c.	Install Ethernet Fiber Switch & Six (6) Fiber Jumpers (Hub 'C')	46	1	LS	7,000.00	7,000.00
103d.	Install Eight (8) Fiber Jumpers (Hub 'D')	46	1	LS	750.00	750.00
103e.	Install Ethernet Fiber Switch in TOS Cabinet	46, 50	4	EA	7,000.00	28,000.00
103f.	Install Ethernet Fiber Switch (Caltrans TMC)	46	1	EA	7,000.00	7,000.00
104.	Install Model 400 Modem (Route 10 E/B Ramp/Redlands/ Club Center)	47	1	EA	6,000.00	6,000.00
105.	Modify Traffic Signal (Route 10 W/B Ramps/Hospitality/ Carnegie)	47	1	LS	22,000.00	22,000.00
~~106.~~	~~Install Telephone Service & Model 170E Master (Route 10 W/B Ramps/Alabama)~~	~~48~~	~~1~~	~~LS~~	Ø	Ø
~~107.~~	~~Install Telephone Service & Model 170E Master (Route 10 E/B Ramps/Tennessee)~~	~~48~~	~~1~~	~~LS~~	Ø	Ø
~~108.~~	~~Install Telephone Service & Model 170E Master (Route 10 E/B-W/B Ramps/Redlands/Ford)~~	~~48~~	~~1~~	~~LS~~	Ø	Ø
109.	Install ~~Telephone Service~~ Spread Spectrum System, Replace Controller Assembly (Euclid/Mission)	49	1	LS	13,000.00	13,000.00
110.	Modify Traffic Signal (Route 60 E/B Ramps/Ramona)	50	1	LS	16,000.00	16,000.00
111.	Modify Traffic Signal (Route 60 E/B Ramps/Grove)	50	1	LS	30,000.00	30,000.00
112.	Modify Traffic Signals Including Interconnect Conduit & Cable to Philadelphia St (Route 60 E/B-W/B Ramps/Euclid/Philadelphia)	51	1	LS	71,371.00	71,371.00
113.	Install ~~Telephone Service~~ Spread Spectrum System (Euclid/Riverside)	52	1	LS	5,000.00	5,000.00
114.	Install ~~Telephone Service~~ Spread Spectrum System, Replace Controller Assembly (Euclid/Walnut)	52	1	LS	10,000.00	10,000.00
115.	Modify Traffic Signal (Route 60 W/B Ramps/Vineyard)	53	1	LS	13,000.00	13,000.00
116.	Modify Traffic Signal (Route 60 E/B Ramps/Archibald)	53	1	LS	16,000.00	16,000.00
117.	Modify Traffic Signal (Route 60 E/B-W/B Ramps/Milliken)	54	1	LS	37,000.00	37,000.00
~~118.~~	~~Install Model 170E Master and Hayes 2400 Baud Modem(Route 15 N/B Ramps/4th)~~	~~-~~	~~1~~	~~LS~~	Ø	Ø
~~119.~~	~~Furnish Only RS-232 Direct Connect Data Card (Newbridge #90-0043-03 or Approved Equal)~~	~~-~~	~~3~~	~~EA~~	Ø	Ø
~~120.~~	~~Furnish Only RS-232 Distribution Panel (Newbridge #90-0350-01 or Approved Equal)~~	~~-~~	~~3~~	~~EA~~	Ø	Ø

Item No.	Description	Plan Sheet	Estimated Quantity	Unit	Unit Price ($)	Amount ($)
Other						
121	Furnish Trailer for Construction Field Office	–	1	LS		33,000.00

TOTAL $1,537,866.00

ARTICLE VI.---The undersigned agrees to complete the work within the time period as stipulated in Section 4 of the Special Provisions.

ARTICLE VII.---The undersigned hereby certifies that he is currently the holder of a valid license as a contractor in the State of California and that the license is the correct class of license for the work described in the project plans and specifications.

ARTICLE VIII

Indemnification - The Contractor agrees to indemnify, defend and hold harmless SANBAG, the State of California, City of Chino, City of Colton, City of Loma Linda, City of Montclair, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, County of San Bernardino, Fluor Corporation, and their authorized offices, employees, agents and volunteers from any and all claims, actions, losses, damages, and/or liability arising out of this contract from any cause whatsoever, including the acts errors or omissions of any person and for any costs or expenses incurred by SANBAG, the State of California, City of Chino, City of Colton, City of Loma Linda, City of Montclair, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, County of San Bernardino, Fluor Corporation, and their authorized officers, employees, agents and volunteers on account of any claim therefore, except where such indemnification is prohibited by law.

ARTICLE IX

Insurance - Without in anyway affecting the indemnity herein provided and in addition thereto the Contractor shall, at the Contractor's expense, procure and maintain insurance on all of its operations with companies acceptable to SANBAG as follows. All insurance shall be kept in full force and effect from the beginning of the work through final acceptance by SANBAG. In addition, the Contractor shall maintain completed operations coverage with a carrier acceptable to SANBAG through the expiration of the patent deficiency in construction statute of repose set forth in Section 337.1 of the Code of Civil Procedure. The policies shall be written by a California admitted carrier with a Best's rating of B++ or better

Workers' Compensation and Employer's Liability Insurance – Workers' Compensation insurance shall be provided in an amount and form to meet all applicable requirements of the Labor Code of the State of California. Employer's Liability Insurance shall be provided in amounts not less than:

(a) $1,000,000 for each accident for bodily injury by accident.
(b) $1,000,000 policy limit for bodily injury by disease.
(c) $1,000,000 for each employee for bodily injury by disease.

Liability Insurance – The Contractor shall carry General Liability and Umbrella or Excess Liability Insurance covering all operations by or on behalf of the Contractor providing insurance for bodily injury liability, and property damage liability for the limits of liability indicated below and including coverage for:

(a) premises, operations and mobile equipment.
(b) products and completed operations.
(c) broad form property damage (including completed operations).
(d) explosion, collapse and underground hazards.
(e) personal injury.
(f) contractual liability.

Liability Limits/Additional Insureds - The limits of liability shall be at least:

(a) $1,000,000 for each occurrence (combined single limit for bodily injury and property damage).
(b) $2,000,000 aggregate for products-completed operations.
(c) $2,000,000 general aggregate. This general aggregate limit shall apply separately to the Contractor's work under this Agreement.
(d) $5,000,000 umbrella or excess liability. For projects over $25,000,000 only, an additional $10,000,000 umbrella or excess liability (for a total of $15,000,000). Umbrella or excess policy shall include products liability completed operations coverage and may be subject to $5,000,000 or $15,000,000 aggregate limits. Further, the umbrella or excess policy shall contain a clause stating that it takes effect (drops down) in the event the primary limits are impaired or exhausted.

SANBAG, the State of California, City of Chino, City of Colton, City of Loma Linda, City of Montclair, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, County of San Bernardino, Fluor Corporation, and their authorized officers, employees, agents and volunteers, shall be named as additional insureds under the General Liability and Umbrella Liability Policies with respect to liability arising out of or connected with work or operations performed by or on behalf of the Contractor under this contract. Coverage for such additional insureds shall not extend to liability:

(1) arising from any defective or substandard condition of the Roadway which existed at or prior to the time the Contractor commenced work, unless such condition has been changed by the work or scope of the work requires the Contractor to maintain existing Roadway facilities and the claim arises from the Contractor's failure to maintain; or
(2) for claims occurring after the work is completed and accepted unless these claims are directly related to alleged acts or omissions of the Contractor which occurred during the course of the work; or
(3) to the extent prohibited by Section 11580.04 of the Insurance Code.

The policy shall stipulate that the insurance afforded the additional insureds shall apply as primary insurance. Any other insurance or self insurance maintained by SANBAG will be excess only and shall not be called upon to contribute with this insurance. Such additional insured coverage shall be provided by a policy provision or by an endorsement providing coverage at least as broad as Additional Insured (Form B) endorsement form CG 2010, as published by the Insurance Services Office (ISO).

Automotive Liability Insurance – The Contractor shall carry automobile liability insurance, including coverage for all owned, hired and non-owned automobiles. The primary limits of liability shall not be less than $1,000,000 combined single limit each accident for bodily injury and property damage. The umbrella or excess liability coverage required under Article IX "Liability Limits/Additional Insureds," shall also apply to automobile liability.

Waiver of Subrogation Rights - Contractor shall require the carriers of the above required coverages to waive all rights of subrogation against SANBAG, the State of California, City of Chino, City of Colton, City of Loma Linda, City of Montclair, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, County of San Bernardino, Fluor Corporation, and their authorized officers, employees, agents and volunteers, contractors and subcontractors.

Policy Forms, Endorsements and Certificates – The Contractor's General Liability Insurance shall be provided under Commercial General Liability policy form No. CG0001 as published by the Insurance Services Office (ISO) or under a policy form at least as broad as policy form No. CG0001.

Evidence of insurance in a form acceptable to SANBAG, including the required "additional insured" endorsements, shall be furnished by the Contractor to SANBAG at or prior to the pre-construction conference. The evidence of insurance shall provide that there will be no cancellation, lapse, or reduction of coverage without thirty (30) days' prior written notice to SANBAG. Certificates of Insurance, as evidence of required insurance, for the General Liability, Auto Liability and Umbrella-Excess Liability policies shall set forth deductible amounts applicable to each policy and all exclusions which are added by endorsement to each policy. SANBAG may expressly allow deductible clauses, which it does not consider excessive, overly broad, or harmful to interests of SANBAG. Standard ISO form No. CG0001 or similar exclusions will be allowed provided they are not inconsistent with the requirements of this section. Allowance of any additional exclusions is at the discretion of SANBAG. Regardless of the allowance of exclusions or deductions by SANBAG, the Contractor shall be responsible for any deductible amount and shall warrant that the coverage provided to SANBAG is consistent with the requirements of this section.

Enforcement – SANBAG may take any steps as are necessary to assure Contractor's compliance with its obligations. Should any insurance policy lapse or be canceled during the contract period the Contractor shall, within thirty (30) days prior to the effective expiration or cancellation date, furnish SANBAG with evidence of renewal or replacement of the policy. Failure to continuously maintain insurance coverage as herein provided is a material breach of contract. In the event the Contractor fails to maintain any insurance coverage required, SANBAG may, but is not required to, maintain this coverage and charge the expense to the Contractor or terminate this Agreement. The required insurance shall be subject to the approval of SANBAG, but any acceptance of insurance certificates by SANBAG shall in no way limit or relieve the Contractor of the Contractor's duties and responsibilities under the Contract to indemnify, defend and hold harmless SANBAG, the State of California, City of Chino, City of Colton, City of Loma Linda, City of Montclair, City of Rancho Cucamonga, City of Redlands, City of Rialto, City of San Bernardino, County of San Bernardino, Fluor Corporation, and their authorized officers, employees, agents and volunteers. Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude SANBAG from taking other actions as is available to it under any other provision of the contract or law. Failure of SANBAG to enforce in a timely manner any of the provisions of this section shall not act as a waiver to enforcement of any of these provisions at a later date.

Miscellaneous – Nothing contained in the Contract is intended to make the public or any member thereof a third party beneficiary of the Insurance or Indemnity provisions of the Contract, nor is any term, condition or other provision of the Contract intended to establish a standard of care owed to the public or any member thereof.

ARTICLE X.---The undersigned agrees to furnish SANBAG with a satisfactory Payment Bond in an amount equal to one hundred percent (100%) of the contract amount and a Performance Bond in an amount equal to one hundred percent (100%) of

the contract amount. These bonds shall be secured from a surety company or companies satisfactory to SANBAG and shall remain in force and effect for a period of one year following the date of filing of Notice of Completion.

ARTICLE XI.--If any legal action is instituted to enforce or declare any party's rights hereunder, each party, including the prevailing party, must bear its own costs and attorneys' fees. This paragraph shall not apply to those costs and attorneys' fees directly arising from any third party legal action against a party hereto and payable under Article VIII, Indemnification.

ARTICLE XII.--The parties acknowledge and agree that this Agreement was entered into and intended to be performed in whole or substantial part in San Bernardino County, California. The parties agree that the venue for any action or claim brought by any party to this Agreement will be the Central District of San Bernardino County. Each party hereby waives any law or rule of court, which would allow them to request or demand a change of venue. If any action or claim concerning this Agreement is brought by any third party, the parties hereto agree to use their best efforts to obtain a change of venue to the Central District of San Bernardino County.

IN WITNESS THEREOF, the parties hereto have caused this contract to be executed on the day and year first above written.

SAN BERNARDINO ASSOCIATED GOVERNMENTS

BY: _____
Dennis Hansberger
President, SANBAG Board of Directors

DATE: _____

APPROVED AS TO FORM AND PROCEDURE

BY: _____
Jene-Rene Basle
SANBAG Counsel

DATE: _____

CONTRACTOR:

BY: _____

DATE: _____

Licensed in accordance with an act providing for registration of contractors,

_____
License No.

_____
Federal Employer Identification Number

Governments SANBAG Working Together

San Bernardino Associated Governments

1170 W. 3rd Street, 2nd Fl, San Bernardino, CA 92410
Phone: (909) 884-8276 Fax: (909) 885-4407
Web: www.sanbag.ca.gov

TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 7

Date: July 19, 2006

Subject: City of Rancho Cucamonga Project Advancement Agreement

Recommendation:* Approve Project Advancement Cooperative Agreement C07025 with the City of Rancho Cucamonga for the Haven Grade Separation Project

Background: A strategy to advance SANBAG Nexus Study interchange, arterial, and grade separation projects to construction prior to the availability of Measure I 2010-2040 revenues was approved by the Board in December 2005 (Attachment 1). A model interagency agreement to implement the program was approved by the Board in April 2005.

The City of Rancho Cucamonga has approved the attached Cooperative Agreement for the Haven Grade Separation project and is requesting approval by the Authority. The agreement commits the Authority to reimbursement of up to $13,856,000 in Measure I 2010-2040 revenues with the reimbursement schedule to be determined by the Measure I 2010-2040 Strategic Plan.

Financial Impact: The agreement commits the Authority to reimbursement of up to $13,856,000 in Measure I 2010-2040 revenues with the reimbursement schedule to be determined by the Measure I 2010-2040 Strategic Plan.

Reviewed By: This item will be reviewed by the Plans and Programs Policy Committee on July 19, 2006.

Responsible Staff: Ty Schuiling, Director of Planning and Programming

*

Approved
Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

ppc0607b-abz
Attachments: brd0512a-ty; C07025, C07025CSS
60907000

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Fl, San Bernardino, CA 92410
Phone: (909) 884-8276 Fax: (909) 885-4407
Web: www.sanbag.ca.gov

Minute Action

AGENDA ITEM: 6

Date: December 7, 2005

Subject: Project Advancement

Recommendation:* 1) Approve project criteria and project advancement strategy as described below.

2) Direct staff to develop a model interagency agreement for reimbursement of eligible costs pursuant to a schedule to be defined as part of the Measure I 2010-2040 Strategic Plan for projects advanced by member agencies with local (non-SANBAG) funds.

Background: Strategies to advance SANBAG Nexus Study (in the rural areas, Measure I 2010-2040 Expenditure Plan) interchange, arterial, and grade separation projects to construction prior to the availability of Measure I 2010-2040 revenues were discussed by the Plans and Programs Policy Committee in September and October, 2005. Issues discussed included project prioritization, interjurisdictional equity, impact on access to funds for future projects, and the need to avoid impact to SANBAG's future bonding capacity and costs.

The committee first directed staff to prepare an inventory of eligible projects that member jurisdictions would advance with local funds if provision were made for reimbursement out of a portion of the Measure I 2010-2040 Expenditure Plan revenues as they become available.

Eligibility criteria are as follows:

1. Project must be a freeway interchange, major street, or railroad grade separation project included in SANBAG Nexus Study if in the urban Valley or Victor Valley areas, or have been included in the freeway interchange,

*

Approved Consent

Approved
Board of Directors

Date: December 7, 2005

Moved: Pomierski *Second:* Gilbreath

In Favor: 22 *Opposed:* 0 *Abstained:* 0

Witnessed: Anna Aldana

Attachment 1

major street, or railroad grade separation project lists used to formulate the Measure I 2010-2040 Expenditure Plan if located in the non-urban areas of the county.

2. Project must be ready to go to construction on or before January 1, 2008.
3. Project must be fully funded through construction with local or other resources not provided by SANBAG.

Eight of the 25 member jurisdictions responded with project submittals. These included $179 million in projects eligible for Measure I 2010-2040 Valley Arterial Program (including grade separation) funds, $166 million in projects eligible for Measure I 2010-2040 Valley Interchange Program funds, and $40 million in projects eligible for Measure I 2010-2040 Victor Valley Major Local Projects funds.

Of these total costs, the net reimbursable shares after development fair share contributions and federal earmarks are subtracted are:

- Valley Measure I Freeway Interchange Program: $107M, which would require 18 years for repayment if 40% of revenues were dedicated to reimbursement
- Valley Measure I Major Street Program: $96M, which would require 10 years for repayment if 40% of revenues were dedicated to reimbursement
- Victor Valley Measure I Major Local Projects Program: $16.2M, which would require 7 years for repayment if 40% of revenues were dedicated to reimbursement

These calculations assume that reimbursement includes no interest. It was noted that inclusion of interest would (depending on the rate) substantially increase the proportion of the program Measure I funds dedicated to reimbursement, further extend the period of repayment, and would certainly affect the ability to fund other projects. The length of time required to reimburse project sponsors would be reduced by reducing the number and cost of projects, or by dedicating a larger share of revenues to reimbursement.

However, the potential impact of a reimbursement process of this magnitude and duration on the ability to "frontload" another program (as Metrolink was frontloaded in the current Measure I) is a major concern. Frontloading requires dedication of early revenues from one or more programs to another, with repayment to the donor program(s) in later years. Determination of the need or desirability of such frontloading for one or more programs is among the objectives of the Measure I 2010-2040 Strategic Plan, and it was recognized that a

decision to proceed with an advancement program of this magnitude with a pre-determined reimbursement schedule could foreclose Strategic Plan options otherwise available to the Board of Directors.

Consequently, the Committee directed staff to develop a revised inventory of projects that member jurisdictions would advance with local funds despite an understanding that the reimbursement rate and schedule would only be determined through the Measure I 2010-2040 Strategic Plan development process, thereby preserving a broader range of options for consideration by the Board of Directors. The inventory is Attachment A. A reduction in the list of candidate Valley Major Street projects is the only change from the previous inventory.

Project advancement strategy
Staff recommends approval of an advancement strategy for projects that meet the criteria listed above, and which local governments are willing to advance with local funds (funds not allocated by SANBAG) with the understanding that the timing of reimbursement of the eligible share of project cost will be determined as part of the Measure I 2010-2040 Strategic Plan.

Staff further recommends development of interagency agreements to be executed by SANBAG and project sponsors through which member agencies will agree to meeting the project eligibility criteria and SANBAG will commit to reimbursement of the eligible share of project cost at such time as is determined through the Measure I 2010-2040 strategic plan. Each such agreement would be subject to approval by the Board of Directors and the governing body of the sponsoring agency.

Financial Impact: This item may increase slightly the scope of the Measure I Strategic Plan, but may remain with the available budget for Fiscal Year 2005-2006. The long-term impact of the project advancement program is expected to be positive in that significant savings in both construction and right-of-way costs may occur through early delivery of these projects.

Reviewed By: This item was reviewed and unanimously recommended for approval by the Plans and Programs Policy Committee on November 16, 2005.

Responsible Staff: Ty Schuiling, Director of Planning and Programming

brd0512a-ty
0660110

SANBAG Contract No. C07025

by and between

San Bernardino Transportation Authority

and

City of Rancho Cucamonga

for

Haven Grade Separation Project

FOR ACCOUNTING PURPOSES ONLY			
☒ Payable ☐ Receivable	Vendor Contract # _____ Vendor ID _____	Retention: ☐ Yes ____ % ☒ No	☒ Original ☐ Amendment

Notes: This is a Measure I 2010-2040 Project Advancement Agreement with reimbursement schedule to be determined through the Measure I 2010-2040 Strategic Plan

Original Contract:	$ 13,856,000	Previous Amendments Total:	$ _____
		Previous Amendments Contingency Total:	$ _____
		Current Amendment:	$ _____
Contingency Amount:	$ _____	Current Amendment Contingency:	$ _____

Contingency Amount requires specific authorization by Task Manager prior to release.

Contract TOTAL → $ 13,856,000

↓ Please include funding allocation for the original contract or the amendment.

Task	Cost Code	Funding Sources	Grant ID	Amounts
TBD - See note above	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____

Original Board Approved Contract Date: 8/2/2006 Contract Start: 8/2/2006 Contract End: TBD

New Amend. Approval (Board) Date: _____ Amend. Start: _____ Amend. End: _____

If this is a multi-year contract/amendment, please allocate budget authority among approved budget authority and future fiscal year(s)-unbudgeted obligations:

Approved Budget Authority →	Fiscal Year: _____ $ _____	**Future Fiscal Year(s) – Unbudgeted Obligation →**	$ _____

Is this consistent with the adopted budget? ☒Yes ☐No

If yes, which Task includes budget authority? N/A

If no, has the budget amendment been submitted? ☐Yes ☐No

CONTRACT MANAGEMENT

Please mark an "X" next to all that apply:

☒ Intergovernmental ☐ Private ☐ Non-Local ☐ Local ☐ Partly Local

Disadvantaged Business Enterprise: ☐No ☐Yes ____%

Task Manager: **Ty Schuiling**

Contract Manager: **Andrea Zureick**

Andrea Zureick 7/13/06

Task Manager Signature Date

Contract Manager Signature Date

Chief Financial Officer Signature Date

Filename: C07025CSS

Form 28 06/06

COOPERATIVE AGREEMENT NO. C07025

BETWEEN

SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY

AND

CITY OF RANCHO CUCAMONGA

FOR

HAVEN GRADE SEPARATION PROJECT

THIS AGREEMENT is made and entered into this _____ day of _____ by and between the San Bernardino County Transportation Authority (hereinafter referred to as "SANBAG") and City of Rancho Cucamonga (hereinafter referred to as "CITY").

WITNESSETH

WHEREAS, the SANBAG Nexus Study and the Measure I 2010-2040 Expenditure Plan identified freeway interchange, major street, and railroad grade separation projects eligible for partial funding from Measure I 2010-2040 revenues; and

WHEREAS, CITY wishes to begin construction of Haven Grade Separation Project (hereinafter referred to as the "PROJECT") by January 1, 2008; and

WHEREAS, SANBAG has determined that this PROJECT is defined within the SANBAG Nexus Study within the urban areas of the county or the Measure I 2010-2040 Expenditure Plan within the non-urban areas of the county; and

WHEREAS, since revenue from Measure I 2010-2040 will not be available until 2010 or later, CITY desires to use its own local (non-SANBAG) funds to construct the PROJECT at this time; and

WHEREAS, SANBAG and CITY are entering into this Agreement that will allow CITY to use funds not contributed or allocated by SANBAG to implement the PROJECT immediately with the understanding that SANBAG will reimburse CITY for eligible PROJECT expenditures at a later date with Measure I 2010-2040 revenue and in accordance with the reimbursement schedule established in the Measure I 2010-2040 Strategic Plan.

NOW, THEREFORE, SANBAG and CITY agree to the following:

SECTION I

SANBAG AGREES:

1. To reimburse CITY for those eligible PROJECT expenses that are incurred by CITY for the PROJECT-specific work activities, as set forth in Attachment A to this Agreement. Said reimbursement amount shall not exceed the percentage of actual cost as set forth in the SANBAG Nexus Study, up to $13,856,000. In the event that the project cost is lower, the reimbursement percentage shall apply. In the event that the project cost is higher than shown in the Nexus Study, the maximum amount eligible for reimbursement shall be $13,856,000 per the Nexus Study.

2. To reimburse CITY, subject to Article 1 of this Section I, in accordance with the reimbursement terms set forth in the Measure I 2010-2040 Strategic Plan and after CITY submits to SANBAG an original and two copies of the signed invoices in the proper form covering those actual allowable PROJECT expenditures that were incurred by CITY.

3. When conducting an audit of the costs claimed under the provisions of this Agreement, to rely to the maximum extent possible on any prior audit of CITY performed pursuant to the provisions of state and federal laws. In the absence of such an audit, work of other auditors will be relied upon to the extent that work is acceptable to SANBAG when planning and conducting additional audits.

SECTION II

CITY AGREES:

1. Subject to Article 1 of Section I, that only eligible PROJECT-specific work activities, as set forth in Attachment A to this Agreement, which are for transportation purposes that conform to the SANBAG Nexus Study and/or the Measure I 2010-2040 Expenditure Plan, will be eligible for future Measure I 2010-2040 reimbursement. CITY agrees that for work it will later claim reimbursement hereunder, it will only undertake eligible PROJECT-specific work activities.

2. To abide by all State and, if applicable, federal policies and procedures pertaining to the PROJECT.

3. After completion of the PROJECT, to prepare and submit to SANBAG an original and two copies of signed invoices for subsequent reimbursement of those eligible PROJECT expenses. CITY further agrees and understands that

SANBAG will not reimburse CITY for a) any PROJECT expenditures that are not described in the PROJECT-specific work activities and/or b) any PROJECT expenditures that occur prior to the date of execution of this Agreement.

4. If Measure I 2010-2040 reimbursement funds are received by CITY, to repay to SANBAG any costs that are determined by subsequent audit to be unallowable within thirty (30) days of CITY receiving notice of audit findings. Should CITY fail to reimburse moneys due SANBAG within (30) days of demand, or within such other period as may be agreed between both parties hereto, SANBAG reserves the right to withhold future payments due CITY from any source under SANBAG's control.

5. To maintain all source documents, books and records connected with its performance under this Agreement for a minimum of five (5) years from the date of the Final Report of Expenditures submittal to SANBAG or until audit resolution is achieved and to make all such supporting information available for inspection and audit by representatives of SANBAG. Copies will be made and furnished by CITY upon request, but in no case less than five (5) years from the date of final reimbursement payment, if said reimbursement occurs under this Agreement.

6. To establish and maintain an accounting system conforming to Generally Accepted Accounting Principles (GAAP) to support CITY request for reimbursement, payment vouchers, or invoices which segregate and accumulate costs of PROJECT work elements and produce monthly reports which clearly identify reimbursable costs, matching fund costs, and other allowable expenditures by CITY.

7. To prepare a Final Report of Expenditures, including a final invoice reporting the actual eligible PROJECT costs expended for those activities described in the work activities, and to submit that Report and invoice no later than 60 days following the completion of those expenditures. The Final Report of Expenditures, three copies of which report shall be submitted to SANBAG, must state that these PROJECT funds were used in conformance this Agreement and for those PROJECT- specific work activities described.

8. To have a PROJECT-specific audit completed by SANBAG upon completion of the PROJECT. The audit must state that all funds expended on the PROJECT were used in conformance with this Agreement.

9. CITY agrees that PROJECT reimbursement schedule will be determined as part of the Measure I 2010-2040 Strategic Plan.

10. CITY agrees to post signs on ends of PROJECT noting that PROJECT is funded with Measure I funds. Signs shall bear the logos of San Bernardino Associated Governments and City of Rancho Cucamonga.

SECTION III

IT IS MUTUALLY AGREED:

1. SANBAG's financial responsibility shall not exceed $13,856,000

2. Eligible PROJECT reimbursements shall include only those costs incurred by CITY for PROJECT-specific work activities that are described in this Agreement and shall not include escalation, interest, or other fees.

3. SANBAG shall have no responsibility to reimburse any otherwise allowable PROJECT expenditures until a date to be determined by the Measure I 2010-2040 Strategic Plan, nor will SANBAG reimburse CITY those said expenditures unless and until such time as a) sufficient Measure I 2010-2040 revenue exists to fund those eligible PROJECT reimbursements and b) CITY has satisfied any and all other necessary PROJECT requirements including the submission of all required invoices and Reports.

4. Once reimbursement is initiated in accordance with a schedule determined through the Measure I 2010-2040 Strategic Plan, total reimbursements to all eligible advanced projects shall not exceed 40 percent of the revenues allocated to the program categories from which the projects will be funded. Reimbursement shall be provided in proportion to the share of total reimbursable cost represented by each project. Reimbursement in full for eligible costs shall be completed no later than receipt of final revenues generated by Measure I 2010-2040.

5. In the event CITY fails to initiate construction by January 1, 2008, fails to complete the PROJECT commenced under this Agreement, fails to perform any of the obligations created by this Agreement, or fails to comply with applicable state and, if applicable, federal laws and regulations, SANBAG reserves the right to terminate this Agreement and any subsequent funding for the PROJECT or a portion thereof upon written notice to CITY. CITY may only be reimbursed for those eligible PROJECT expenditures that occur prior to the date of termination when successfully completed as provided for pursuant to this Agreement. An audit may be performed as provided in Section II, Article (8) of this Agreement.

6. Neither SANBAG nor any officer or employee thereof is responsible for any injury, damage or liability occurring or arising by reason of anything done or omitted to be done by CITY under or in connection with any work, authority or jurisdiction delegated to CITY under this Agreement. It is understood and

agreed that, pursuant to Government Code Section 895.4, CITY shall fully defend, indemnify and save harmless SANBAG, its officers and employees from all claims, suits or actions of every name, kind and description brought for or on account of injury (as defined by Government Code Section 810.8) occurring by reason of anything done or omitted to be done by CITY under or in connection with any work, authority or jurisdiction delegated to CITY under this Agreement.

7. This Agreement will be considered terminated upon reimbursement of eligible costs by SANBAG.

San Bernardino County Transportation Authority

By: _____
Dennis Hansberger
President, SANBAG Board of Directors

Date: _____

City of Rancho Cucamonga

By: _____

Date: _____

APPROVED AS TO FORM AND PROCEDURE:

By: _____
Jean-Rene Basle
SANBAG County Counsel

Date: _____

Governments SANBAG Working Together

San Bernardino Associated Governments

1170 W. 3rd Street, 2nd Fl, San Bernardino, CA 92410
Phone: (909) 884-8276 Fax: (909) 885-4407
Web: www.sanbag.ca.gov

TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: 8

Date: July 19, 2006

Subject: City of Yucaipa Project Advancement Agreement

Recommendation:* Approve Project Advancement Cooperative Agreement C07047 with the City of Yucaipa for the I-10 Oak Glen/Live Oak Interchange Project

Background: A strategy to advance SANBAG Nexus Study interchange, arterial, and grade separation projects to construction prior to the availability of Measure I 2010-2040 revenues was approved by the Board in December 2005 (Attachment 1). A model interagency agreement to implement the program was approved by the Board in April 2005.

The City of Yucaipa has approved the attached Cooperative Agreement for the I-10 Oak Glen/Live Oak Interchange project and is requesting approval by the Authority. The agreement commits the Authority to reimbursement of up to $6,286,672 in Measure I 2010-2040 revenues with the reimbursement schedule to be determined by the Measure I 2010-2040 Strategic Plan.

Financial Impact: The agreement commits the Authority to reimbursement of up to $6,286,672 in Measure I 2010-2040 revenues with the reimbursement schedule to be determined by the Measure I 2010-2040 Strategic Plan.

Reviewed By: This item will be reviewed by the Plans and Programs Policy Committee on July 19, 2006.

Responsible Staff: Ty Schuiling, Director of Planning and Programming

*

Approved
Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

ppc0607a-abz
Attachments: brd0512a-ty; C07047; C07047CSS
60907000

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Fl, San Bernardino, CA 92410
Phone: (909) 884-8276 Fax: (909) 885-4407
Web: www.sanbag.ca.gov

Minute Action

AGENDA ITEM: 6

Date: December 7, 2005

Subject: Project Advancement

Recommendation:* 1) Approve project criteria and project advancement strategy as described below.

2) Direct staff to develop a model interagency agreement for reimbursement of eligible costs pursuant to a schedule to be defined as part of the Measure I 2010-2040 Strategic Plan for projects advanced by member agencies with local (non-SANBAG) funds.

Background: Strategies to advance SANBAG Nexus Study (in the rural areas, Measure I 2010-2040 Expenditure Plan) interchange, arterial, and grade separation projects to construction prior to the availability of Measure I 2010-2040 revenues were discussed by the Plans and Programs Policy Committee in September and October, 2005. Issues discussed included project prioritization, interjurisdictional equity, impact on access to funds for future projects, and the need to avoid impact to SANBAG's future bonding capacity and costs.

The committee first directed staff to prepare an inventory of eligible projects that member jurisdictions would advance with local funds if provision were made for reimbursement out of a portion of the Measure I 2010-2040 Expenditure Plan revenues as they become available.

Eligibility criteria are as follows:

1. Project must be a freeway interchange, major street, or railroad grade separation project included in SANBAG Nexus Study if in the urban Valley or Victor Valley areas, or have been included in the freeway interchange,

*

Approved Consent

Approved
Board of Directors

Date: December 7, 2005

Moved: Pomierski *Second:* Gilbreath

In Favor: 22 *Opposed:* 0 *Abstained:* 0

Witnessed: Anna Aldana

Attachment 1

major street, or railroad grade separation project lists used to formulate the Measure I 2010-2040 Expenditure Plan if located in the non-urban areas of the county.

2. Project must be ready to go to construction on or before January 1, 2008.
3. Project must be fully funded through construction with local or other resources not provided by SANBAG.

Eight of the 25 member jurisdictions responded with project submittals. These included $179 million in projects eligible for Measure I 2010-2040 Valley Arterial Program (including grade separation) funds, $166 million in projects eligible for Measure I 2010-2040 Valley Interchange Program funds, and $40 million in projects eligible for Measure I 2010-2040 Victor Valley Major Local Projects funds.

Of these total costs, the net reimbursable shares after development fair share contributions and federal earmarks are subtracted are:

- Valley Measure I Freeway Interchange Program: $107M, which would require 18 years for repayment if 40% of revenues were dedicated to reimbursement
- Valley Measure I Major Street Program: $96M, which would require 10 years for repayment if 40% of revenues were dedicated to reimbursement
- Victor Valley Measure I Major Local Projects Program: $16.2M, which would require 7 years for repayment if 40% of revenues were dedicated to reimbursement

These calculations assume that reimbursement includes no interest. It was noted that inclusion of interest would (depending on the rate) substantially increase the proportion of the program Measure I funds dedicated to reimbursement, further extend the period of repayment, and would certainly affect the ability to fund other projects. The length of time required to reimburse project sponsors would be reduced by reducing the number and cost of projects, or by dedicating a larger share of revenues to reimbursement.

However, the potential impact of a reimbursement process of this magnitude and duration on the ability to "frontload" another program (as Metrolink was frontloaded in the current Measure I) is a major concern. Frontloading requires dedication of early revenues from one or more programs to another, with repayment to the donor program(s) in later years. Determination of the need or desirability of such frontloading for one or more programs is among the objectives of the Measure I 2010-2040 Strategic Plan, and it was recognized that a

decision to proceed with an advancement program of this magnitude with a pre-determined reimbursement schedule could foreclose Strategic Plan options otherwise available to the Board of Directors.

Consequently, the Committee directed staff to develop a revised inventory of projects that member jurisdictions would advance with local funds despite an understanding that the reimbursement rate and schedule would only be determined through the Measure I 2010-2040 Strategic Plan development process, thereby preserving a broader range of options for consideration by the Board of Directors. The inventory is Attachment A. A reduction in the list of candidate Valley Major Street projects is the only change from the previous inventory.

Project advancement strategy
Staff recommends approval of an advancement strategy for projects that meet the criteria listed above, and which local governments are willing to advance with local funds (funds not allocated by SANBAG) with the understanding that the timing of reimbursement of the eligible share of project cost will be determined as part of the Measure I 2010-2040 Strategic Plan.

Staff further recommends development of interagency agreements to be executed by SANBAG and project sponsors through which member agencies will agree to meeting the project eligibility criteria and SANBAG will commit to reimbursement of the eligible share of project cost at such time as is determined through the Measure I 2010-2040 strategic plan. Each such agreement would be subject to approval by the Board of Directors and the governing body of the sponsoring agency.

Financial Impact: This item may increase slightly the scope of the Measure I Strategic Plan, but may remain with the available budget for Fiscal Year 2005-2006. The long-term impact of the project advancement program is expected to be positive in that significant savings in both construction and right-of-way costs may occur through early delivery of these projects.

Reviewed By: This item was reviewed and unanimously recommended for approval by the Plans and Programs Policy Committee on November 16, 2005.

Responsible Staff: Ty Schuiling, Director of Planning and Programming

brd0512a-ty
0660110

SANBAG Contract No. C07047

by and between

San Bernardino Transportation Authority

and

City of Yucaipa

for

I-10 Oak Glen/Live Oak Interchange

FOR ACCOUNTING PURPOSES ONLY			
☒ Payable ☐ Receivable	Vendor Contract # _____ Vendor ID _____	Retention: ☐ Yes _____ % ☒ No	☒ Original ☐ Amendment

Notes: This is a Measure I 2010-2040 Project Advancement Agreement with reimbursement schedule to be determined through the Measure I 2010-2040 Strategic Plan

Original Contract:	$ 6,286,672	Previous Amendments Total:	$ _____
		Previous Amendments Contingency Total:	$ _____
		Current Amendment:	$ _____
Contingency Amount:	$ _____	Current Amendment Contingency:	$ _____

Contingency Amount requires specific authorization by Task Manager prior to release.

Contract TOTAL → $ **6,286,672**

↓ Please include funding allocation for the original contract or the amendment.

Task	Cost Code	Funding Sources	Grant ID	Amounts
TBD - See note above	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____
_____	_____	_____	_____	$ _____

Original Board Approved Contract Date: 8/2/2006 Contract Start: 8/2/2006 Contract End: TBD

New Amend. Approval (Board) Date: _____ Amend. Start: _____ Amend. End: _____

If this is a multi-year contract/amendment, please allocate budget authority among approved budget authority and future fiscal year(s)-unbudgeted obligations:

Approved Budget Authority →	Fiscal Year: _____ $ _____	**Future Fiscal Year(s) – Unbudgeted Obligation →**	$ _____

Is this consistent with the adopted budget? ☒Yes ☐No

If yes, which Task includes budget authority? N/A

If no, has the budget amendment been submitted? ☐Yes ☐No

CONTRACT MANAGEMENT

Please mark an "X" next to all that apply:

☒ Intergovernmental ☐ Private ☐ Non-Local ☐ Local ☐ Partly Local

Disadvantaged Business Enterprise: ☐No ☐Yes _____%

Task Manager: **Ty Schuiling**

Contract Manager: **Andrea Zureick**

_____ Date

Task Manager Signature

Andrea Zureick 7/13/06

Contract Manager Signature Date

_____ Date

Chief Financial Officer Signature

Filename: C07047CSS

Form 28 06/06

COOPERATIVE AGREEMENT NO. C07047

BETWEEN

SAN BERNARDINO COUNTY TRANSPORTATION AUTHORITY

AND

CITY OF YUCAIPA

FOR

I-10 OAK GLEN/LIVE OAK INTERCHANGE

THIS AGREEMENT is made and entered into this _____ day of _____ by and between the San Bernardino County Transportation Authority (hereinafter referred to as "SANBAG") and City of Yucaipa (hereinafter referred to as "CITY").

WITNESSETH

WHEREAS, the SANBAG Nexus Study and the Measure I 2010-2040 Expenditure Plan identified freeway interchange, major street, and railroad grade separation projects eligible for partial funding from Measure I 2010-2040 revenues; and

WHEREAS, CITY wishes to begin construction of I-10 Oak Glen/Live Oak Interchange (hereinafter referred to as the "PROJECT") by January 1, 2008; and

WHEREAS, SANBAG has determined that this PROJECT is defined within the SANBAG Nexus Study within the urban areas of the county or the Measure I 2010-2040 Expenditure Plan within the non-urban areas of the county; and

WHEREAS, since revenue from Measure I 2010-2040 will not be available until 2010 or later, CITY desires to use its own local (non-SANBAG) funds to construct the PROJECT at this time; and

WHEREAS, SANBAG and CITY are entering into this Agreement that will allow CITY to use funds not contributed or allocated by SANBAG to implement the PROJECT immediately with the understanding that SANBAG will reimburse CITY for eligible PROJECT expenditures at a later date with Measure I 2010-2040 revenue and in accordance with the reimbursement schedule established in the Measure I 2010-2040 Strategic Plan.

NOW, THEREFORE, SANBAG and CITY agree to the following:

SECTION I

SANBAG AGREES:

1. To reimburse CITY for those eligible PROJECT expenses that are incurred by CITY for the PROJECT-specific work activities, as set forth in Attachment A to this Agreement. Said reimbursement amount shall not exceed the percentage of actual cost as set forth in the SANBAG Nexus Study, up to $6,286,672 (63% of net cost). The SANBAG Nexus Study states an actual (estimated) cost of $18,403,246. In the event that the project cost is lower, the reimbursement percentage shall apply. In this event, the reimbursement shall be calculated as follows:

    a. Subtract $8,424,401 in Traffic Congestion Relief Program funding from the actual cost as documented following the procedures outlined in SECTION II below.
    b. Multiply the result by the reimbursement percentage (63% from the SANBAG Development Mitigation Nexus Study, 2005).

    In the event that all or a portion of the Federal/State grant funds identified above are not available for application to this project, the reimbursement amount shall be recalculated to reflect the change in funding. In the event that additional Federal/State grant funds are applied to this project (in addition to the grant listed above) the reimbursement amount shall be recalculated to reflect the change in funding.

    These calculations are based on the principles contained in Chapter 4, Section 4B of the 2005 Congestion Management Program prepared by the San Bernardino County Congestion Management Agency (CMA), adopted by the CMA in November, 2005. The two pertinent principles are:

    - Federal or state appropriations from transportation sources for specific projects will reduce the project costs, not just reduce the required developer mitigation. The percentage share of the remaining project costs allocated to development and other sources will remain the same.

    - Funds generated by local jurisdictions from non-transportation sources (federal, state or other) will be eligible for credit against local fair-share development contributions. In addition, SANBAG may permit the use of transportation dollars (federal or state appropriations) as a credit against local fair-share development contributions on an exception basis, when the local jurisdiction shows that such transportation dollars are net "new" dollars to the regional transportation system.

2. To reimburse CITY, subject to Article 1 of this Section I, in accordance with the reimbursement terms set forth in the Measure I 2010-2040 Strategic Plan and after CITY submits to SANBAG an original and two copies of the signed invoices in the proper form covering those actual allowable PROJECT expenditures that were incurred by CITY.

3. When conducting an audit of the costs claimed under the provisions of this Agreement, to rely to the maximum extent possible on any prior audit of CITY performed pursuant to the provisions of state and federal laws. In the absence of such an audit, work of other auditors will be relied upon to the extent that work is acceptable to SANBAG when planning and conducting additional audits.

SECTION II

CITY AGREES:

1. Subject to Article 1 of Section I, that only eligible PROJECT-specific work activities, as set forth in Attachment A to this Agreement, which are for transportation purposes that conform to the SANBAG Nexus Study and/or the Measure I 2010-2040 Expenditure Plan, will be eligible for future Measure I 2010-2040 reimbursement. CITY agrees that for work it will later claim reimbursement hereunder, it will only undertake eligible PROJECT-specific work activities.

2. To abide by all State and, if applicable, federal policies and procedures pertaining to the PROJECT.

3. After completion of the PROJECT, to prepare and submit to SANBAG an original and two copies of signed invoices for subsequent reimbursement of those eligible PROJECT expenses. CITY further agrees and understands that SANBAG will not reimburse CITY for a) any PROJECT expenditures that are not described in the PROJECT-specific work activities and/or b) any PROJECT expenditures that occur prior to the date of execution of this Agreement.

4. If Measure I 2010-2040 reimbursement funds are received by CITY, to repay to SANBAG any costs that are determined by subsequent audit to be unallowable within thirty (30) days of CITY receiving notice of audit findings. Should CITY fail to reimburse moneys due SANBAG within (30) days of demand, or within such other period as may be agreed between both parties hereto, SANBAG reserves the right to withhold future payments due CITY from any source under SANBAG's control.

5. To maintain all source documents, books and records connected with its performance under this Agreement for a minimum of five (5) years from the date of the Final Report of Expenditures submittal to SANBAG or until audit resolution is achieved and to make all such supporting information available for inspection and audit by representatives of SANBAG. Copies will be made and furnished by CITY upon request, but in no case less than five (5) years from the date of final reimbursement payment, if said reimbursement occurs under this Agreement.

6. To establish and maintain an accounting system conforming to Generally Accepted Accounting Principles (GAAP) to support CITY request for reimbursement, payment vouchers, or invoices which segregate and accumulate costs of PROJECT work

elements and produce monthly reports which clearly identify reimbursable costs, matching fund costs, and other allowable expenditures by CITY.

7. To prepare a Final Report of Expenditures, including a final invoice reporting the actual eligible PROJECT costs expended for those activities described in the work activities, and to submit that Report and invoice no later than 60 days following the completion of those expenditures. The Final Report of Expenditures, three copies of which report shall be submitted to SANBAG, must state that these PROJECT funds were used in conformance this Agreement and for those PROJECT- specific work activities described.

8. To have a PROJECT-specific audit completed by SANBAG upon completion of the PROJECT. The audit must state that all funds expended on the PROJECT were used in conformance with this Agreement.

9. CITY agrees that PROJECT reimbursement schedule will be determined as part of the Measure I 2010-2040 Strategic Plan.

10. CITY agrees to post signs on ends of PROJECT noting that PROJECT is funded with Measure I funds. Signs shall bear the logos of San Bernardino Associated Governments and City of Yucaipa.

SECTION III

IT IS MUTUALLY AGREED:

1. SANBAG's financial responsibility shall not exceed $6,286,672 (as adjusted based on the availability of Federal/State transportation funding as described in SECTION I) or the amount based on actual cost as derived in SECTION I, whichever is less.

2. Eligible PROJECT reimbursements shall include only those costs incurred by CITY for PROJECT-specific work activities that are described in this Agreement and shall not include escalation, interest, or other fees.

3. SANBAG shall have no responsibility to reimburse any otherwise allowable PROJECT expenditures until a date to be determined by the Measure I 2010-2040 Strategic Plan, nor will SANBAG reimburse CITY those said expenditures unless and until such time as a) sufficient Measure I 2010-2040 revenue exists to fund those eligible PROJECT reimbursements and b) CITY has satisfied any and all other necessary PROJECT requirements including the submission of all required invoices and Reports.

4. Once reimbursement is initiated in accordance with a schedule determined through the Measure I 2010-2040 Strategic Plan, total reimbursements to all eligible advanced projects shall not exceed 40 percent of the revenues allocated to the program categories from which the projects will be funded. Reimbursement shall be provided

in proportion to the share of total reimbursable cost represented by each project. Reimbursement in full for eligible costs shall be completed no later than receipt of final revenues generated by Measure I 2010-2040.

5. In the event CITY fails to initiate construction by January 1, 2008, fails complete the PROJECT commenced under this Agreement, fails to perform any of the obligations created by this Agreement, or fails to comply with applicable state and, if applicable, federal laws and regulations, SANBAG reserves the right to terminate this Agreement and any subsequent funding for the PROJECT or a portion thereof upon written notice to CITY. CITY may only be reimbursed for those eligible PROJECT expenditures that occur prior to the date of termination when successfully completed as provided for pursuant to this Agreement. An audit may be performed as provided in Section II, Article (8) of this Agreement.

6. Neither SANBAG nor any officer or employee thereof is responsible for any injury, damage or liability occurring or arising by reason of anything done or omitted to be done by CITY under or in connection with any work, authority or jurisdiction delegated to CITY under this Agreement. It is understood and agreed that, pursuant to Government Code Section 895.4, CITY shall fully defend, indemnify and save harmless SANBAG, its officers and employees from all claims, suits or actions of every name, kind and description brought for or on account of injury (as defined by Government Code Section 810.8) occurring by reason of anything done or omitted to be done by CITY under or in connection with any work, authority or jurisdiction delegated to CITY under this Agreement.

7. This Agreement will be considered terminated upon reimbursement of eligible costs by SANBAG.

San Bernardino County
Transportation Authority

By: _____
Dennis Hansberger
President, SANBAG Board of Directors

Date: _____

APPROVED AS TO FORM AND PROCEDURE:

By: _____
Jean-Rene Basle
SANBAG County Counsel

Date: _____

City of Yucaipa

By: _____

Date: _____

Governments SANBAG Working Together

San Bernardino Associated Governments

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TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

AGENDA ITEM: **9**

Date: July 19, 2006

Subject: Request for Proposal (RFP) for Freeway Service Patrol (FSP) Towing Services

Recommendation:* Approve the release of RFP No. C07-028 for the provision of FSP Towing Services along Interstate (I)-10, I-215, and State Route (SR) 60.

Background: FSP consists of a fleet of tow trucks roaming urban freeways for the purpose of assisting motorists with their disabled vehicles during peak periods of congestion. The stretch of highway that the fleet roams up and down is referred to as a "beat". As tow trucks roam a particular beat, motorists can expect a quick response from FSP when their vehicles become disabled. Over the years, FSP programs have demonstrated many benefits by reducing: the amount of time a motorist is in unsafe conditions in traffic lanes, traffic delay, fuel consumption, vehicular emissions and secondary accidents.

San Bernardino's entrance into the State Funded FSP program began several years ago, when legislation was signed into law to require Caltrans to fund new counties who wish to enter the program. In Fiscal Year (FY) 2005/2006, additional funding was allocated to the State program so that three new counties could begin FSP implementation (including San Bernardino County). Funding from the State is based on population, urban lane miles and congestion in the urban area which qualifies for FSP service. In San Bernardino County, the urban area which qualifies for FSP funding, is in the valley portion of the county.

In January 2006, four FSP beats were implemented, providing eight roaming tow trucks on I 10 from the Los Angeles County line, east to Waterman Avenue in San Bernardino, and on I 15 from the Riverside County line to Baseline Street in

*

Approved
Plans and Programs Committee

Date: July 19, 2006

Moved: Second:

In Favor: Opposed: Abstained:

Witnessed: _____

PPC0607a-KL.doc
Attachments:PPC0607aSOW and FSP Beat Map
TN 70407000

Rancho Cucamonga. Since 2004, SANBAG has also operated FSP service during I 10 construction, between the SR 30 interchange and through Yucaipa.

The FY 2005/2006 allocation was sufficient to fund up to six beats; however, the two additional beats that have been funded could not begin until SANBAG secured a dedicated radio frequency that is used by CHP and tow providers. The existing FSP beats use Riverside County's FSP radio frequency and that frequency is at capacity. The San Bernardino County FSP radio frequency is under development and will be in service for use by the end of the calendar year.

While these activities were taking place, in the spring of 2006, the State submitted a budget change request so that $6.2 million in funding could be added to the State FSP funding pot. With the FY 2006/2007 Budget approved, SANBAG is now able to fund on an ongoing basis, an additional two beats, which would bring the State funded program up to eight beats plus the construction FSP on I 10.

The two beats already funded and awaiting implementation are Beat 4 (SR 60 from Los Angeles County line to the Riverside County line) and Beat 6 (I 215 from the Riverside County line to 2nd Street in the City of San Bernardino).

At this point, the two additional beats to be implemented with the new State funding, have yet to be determined and approved by the Board. To assist the Board in this decision, Caltrans provides a methodology to analyze and recommend FSP service. This methodology is used by all of the FSP Programs throughout the State. The methodology was developed by the University of California at Berkley (UC Berkley) Transportation Studies Program, and takes into account a variety of information such as historical data, including but not limited to: lane miles, shoulder availability, accident information and average daily miles of travel. After analysis of freeway segments in the valley portion of the county which do not have existing FSP service, the following is a ranking in order of those unfunded beat areas and their Benefit to Cost (B/C) ratio using the UC Berkley methodology.

Table 1 – Beat Areas in San Bernardino Valley Not Yet Implemented

Ranking	Beat Area	Beat Length	B/C Ratio
1	I-10 Waterman Ave to Orange Street	5.65	23.48
2	I-215 2nd Street to University Parkway	4.84	7.13
3	I 215 University Parkway to I 15 Kenwood Avenue	8.70	6.12
4	SR 210 Mountain Ave (LA County) to Day Creek Road	8.00	2.57
5	I-15 Baseline Road to I-15/I-215 Interchange	9.00	2.19
6	SR 30/SR 259 to San Bernardino Avenue (JNO I 10)	10.06	0.26
8	SR 71/SR 60 to SR 71 and Euclid Avenue	8.50	0.08
	Total Miles of Unfunded Valley FSP Beat Segments	**54.75**	

Based on this analysis, Staff recommends that the top two beat segments in the Table above be funded with the additional funds provided by the State. Please refer to the attached map which depicts the current seven funded beats (beats 1 to 6 and the I 10 FSP construction beat) and the two new beats to be funded with the additional State funding (Beat 7: I 215 from 2nd Street to University, and Beat 8: I 10 from Waterman to Orange Street). Based on new State funds that will be made available in FY 2006/2007, and assuming that all of the State funding will continue in perpetuity, Staff is confident that the existing beats and the new beats can be implemented on an annual basis. In the future, should additional funding be added to the program, or should the existing funds exceed the current program needs, then Staff will bring back to the Board options for expanding the program into the unfunded areas.

Upon approval of the RFP, tow service providers will have six weeks to prepare and submit proposals. Staff will bring to the Board in November recommended contractor(s) for these new beats, and upon Board approval, it is anticipated that beats 4 and 6 can be implemented in January 2007 and beats 7 and 8 implemented by March 2007. This staggered implementation is necessary so that equipment can be procured, installed and tested, so that the contractors can hire and train tow truck drivers, and so that CHP is adequately staffed and ready to oversee the new beats. Once implemented, the providers will be under contract for three years of tow service implementation, with two one-year options to extend the contract(s).

Please refer to Attachment A, the Scope of Services for the RFP, which outlines the parameters for the tow services for these four beat areas. The RFP will be released by SANBAG and proposals received will be evaluated by SANBAG, CHP, RCTC and Caltrans Staff. Upon Board approval, the Tow Services Contract(s) will be executed and funded by SANBAG, but jointly managed by SANBAG and CHP.

Financial Impact: Funds for the tow providers for the four new beats were included in the FY 2006/2007 Budget, and will be funded through a combination of State funds, Measure I Traffic Enhancement and Environmental Funds and Mobile Source Air Pollution Reduction Review Committee funding. TN 70407000.

Reviewed By: This item will be reviewed by the Plans and Programs Committee on July 19, 2006. The RFP, Scope of Work and Contract has been reviewed as to form by SANBAG legal counsel, Caltrans District 8, as well as CHP Inland Communications' Center.

Responsible Staff: Kelly Lynn, Air Quality/Mobility Programs Manager
Michelle Kirkhoff, Director, Air Quality/Mobility Programs

PPC0607a-KL.doc
TN 70407000

This Request for Proposal (RFP) is being advertised by the San Bernardino Associated Governments (SANBAG) to provide a Freeway Service Patrol (FSP) service. SANBAG has entered into a Memorandum of Understanding with the California Department of Transportation (Caltrans) and the California Highway Patrol (CHP) to operate a freeway service patrol for traffic mitigation in San Bernardino County.

Section 21718 (a) of the California Vehicle Code specifically authorizes the CHP to be responsible for freeway service patrols stopping on freeways for the purpose of rapid removal of impediments to traffic. Article 3, Section 91, of the Streets and Highways Code, states that Caltrans has responsibility to improve and maintain the state highways. Caltrans also has the responsibility for traffic management and removing impediments from the highways.

If awarded a contract, the Contractor shall have 60 days after the notice to proceed in which to acquire the required equipment, have it inspected, hire and train drivers and be operable. Any company who cannot meet the 60 day operational requirement shall not be awarded the proposal.

4.1 Contract Representatives:

SANBAG, Caltrans and the CHP will jointly oversee the service. CHP is responsible for dispatch services to incident locations within the vehicle's patrol limits. The dispatching will be done in accordance with the contract for the service. A manual will be given to the successful Contractor explaining the types of incidents to which his/her vehicle operators may be dispatched.

4.2 Service Location:

The Freeway Service Patrol operates on selected freeway segments referred to as "Beats". Each Beat has specific turnaround locations and designated drop locations identified by the CHP. Attachment "A" shows the specific limits, number of tow trucks, number of back-up trucks, hours of operation and tentative holidays on which the cost of each beat shall be based. SANBAG reserves the right to add or delete holidays to the work schedule. Travel time to and from the beat will be at the expense of the Contractor.

At any time during the contract's term, SANBAG reserves the right to adjust Beat specifications to better accommodate demand for the service, which may include but not be limited to the beat length, days, and hours of operation. These changes can occur during the course of the contract through written change orders. If warranted during the service hours of operation, the Contractor may be requested to temporarily reassign his/her FSP operators/trucks to locations outside the assigned beat.

4.3 Description of Service:

The purpose of the project is to provide for the rapid removal of disabled vehicles and those involved in minor accidents from the freeway. Where conditions permit, safe removal of small debris will be required. Contractor vehicles shall be exclusively dedicated to the service during the hours of operation. All vehicle maintenance activities shall be conducted during non-service hours.

The Contractor's vehicle operators shall assist motorists involved in minor accidents and those with disabled vehicles. They shall be responsible for clearing the freeway of automobiles, small trucks and small debris. When and where conditions warrant, service may be executed on the freeway shoulders. Where conditions do not warrant, vehicle operators will remove the vehicles from the freeway to provide service. The vehicle operators shall continuously patrol their assigned beat, respond to CHP dispatched calls for service, use the designated turnaround locations and use the CHP designated drop locations.

Freeway Service Patrol vehicle operators may be required to change flat tires, provide "jump" starts, provide one gallon of gasoline or diesel fuel, temporarily tape cooling system hoses and refill radiators. Vehicle operators may spend a maximum of 10 minutes per disablement in attempting to mobilize a vehicle. All Freeway Service Patrol services will be provided at no cost to the motorist. FSP vehicle operators will not be allowed to accept gratuities, perform secondary towing services, recommend secondary tows, or recommend repair/body shop businesses. To promote a safe work environment and to maintain a level of professionalism, the CHP has developed a set of Standard Operating Procedures for the FSP program that must be followed by the tow company and their vehicle operators. Drivers found not to be complying with FSP procedures may be suspended or terminated from the FSP program and the company may be fined

three (3) times the hourly contract rate in one (1) minute increments until a replacement vehicle is provided, or fined for the entire shift at three (3) times the hourly rate at the discretion of the FSP Field Supervisors.

If a vehicle cannot be mobilized within the ten (10) minute time limit, it shall be towed to a designated drop location identified by the CHP. The motorist can request the FSP vehicle operator to call the CHP Communications center to request a CHP rotational tow or other services. FSP vehicle operators shall not be allowed to tow as an independent contractor from an incident that occurred during the Freeway Service Patrol shift unless called as a rotation tow by CHP. If called as a rotation tow after a Freeway Service Patrol shift, the vehicle operator must remove all Freeway Service Patrol vehicle markings and change his/her Freeway Service Patrol uniform.

There may be some instances where FSP vehicle operators may be requested to provide assistance to CHP officers. Freeway Service Patrol vehicle operators shall follow the instructions of the CHP officer at the scene of any incident within the scope of the Freeway Service Patrol program.

4.4 Equipment Requirements:

A. Tow Truck Requirements:

Vehicles will be exclusively dedicated to the Freeway Service Patrol during its hours of operation.

The Freeway Service Patrol will utilize at a minimum, Class A trucks with a minimum gross vehicle weight rating of 14,000 pounds, dual wheel chassis and four (4) ton recovery equipment rating. All trucks and beds used in the Freeway Service Patrol program shall be less than five (5) years old, free of any physical damage. Prior to commencement of service, the CHP will inspect each vehicle designated for the Freeway Service Patrol to ensure that it meets the vehicle specifications and to ensure that it meets or exceeds safety requirements. These inspections will occur prior to the start of service. Succeeding inspections will occur periodically as determined by the CHP. Documentation of the vehicle identification number and successful completion of the inspection will be kept on file at the CHP office and Contractor's base office. Any unsafe or poorly maintained

vehicle(s) or improperly equipped vehicle(s) shall be removed from service or repaired as directed by the CHP, and the Contractor shall be fined at double the Contractor's hourly rate plus the loss of revenue for the down time. Spare vehicles will be required to complete the shifts of vehicles removed from service. The Contractor will be required to have a spare vehicle available for service at all times.

Freeway Service Patrol vehicles bearing the service patrol title, logo, and vehicle identification number shall be painted white. There will be no color requirement for the trim. If trim is used, it shall be no greater than four (4) inches on the front and sides of the vehicle. No other accessory equipment shall be mounted or installed without prior CHP approval. This includes but is not limited to bras, chrome wheel covers or window tint.

Each tow truck shall be equipped, as a minimum, with the following:

1. Wheel lift towing equipment, with a minimum lift rating of 3,000 pounds. All tow equipment shall include proper safety straps.
2. Boom with a minimum static rating of 5,000 pounds.
3. Winch Cable - 8,000 pound rating on the first layer of cable.
4. Winch Cable - 100 ft., 3/8-inch diameter, with a working limit of 3500 pounds.
5. Towing slings rated at 3,000 pounds minimum.
6. Two (2) Tow chains 5/16" alloy or OEM specs., J&T hook assembly.
7. Rubber face push bumper.
8. Mounted spotlight capable of directing a beam both front and rear.
9. Amber warning lights with front and rear directional flashing capability, with on/off switch in cab.
10. Public address system.
11. Power outlets ("hot boxes"), front and rear mounted, with outlets compatible to 12-volt booster cables.
12. Heavy duty, 60+ amp battery.
13. Radios with the ability to communicate with the Contractor's base office.
14. Programmable scanners capable of scanning between the 39 and 48 MHz used by the CHP.
15. Suitable cab lighting.
16. Trailer hitch capable of handling a 1 7/8-inch ball and 2 inch ball.
17. One (1) 1 7/8-inch ball and one (1) 2 inch ball.
18. Rear work lights.
19. Safety chain D-ring or eyelet mounted on rear of truck.
20. Motorcycle Straps (2)
21. Diesel fuel in plastic jerry cans (5 gallons)
22. Unleaded gasoline in plastic jerry cans (5 gallons)

23. Safety chains min. 5 ft.	(2)
24. First aid kit (small 5" x 9")	(1)
25. Fire extinguisher aggregate rating of at least 4 B-C units	(1)
26. Pry bar - 36" or longer	(1)
27. Radiator water in plastic container	(5 gallons)
28. Sling crossbar spacer blocks	(2)
29. 4" x 4" x 48" wooden cross beam	(1)
30. 4" x 4" x 60" wooden cross beam	(1)
31. 24" wide street broom	(1)
32. Square point shovel	(1)
33. Fusees (highway flares), 15 minute, or	(36)
Fusees (highway flares), 30 minute	(20)
34. Cones 18"	(6)
35. Hydraulic jack, 2-ton, floor	(1)
36. Four way lug wrench (1 std.)	(1)
37. Four way lug wrench (1 metric)	(1)
38. Rechargeable air bottle, hoses and fittings to fit tire valve stems, 100 psi capacity	(1)
39. Flashlight and spare batteries	(1)
40. Tail lights/brake lights, portable remote with extension cord	(1 set)
41. Booster cables, 25 ft. long minimum, 3-gauge copper wire with heavy-duty clamps and one end adapted to truck's power outlets	(1 set)
42. Funnel, multi-purpose, flexible spout	(1)
43. Pop-Up Dolly, portable for removing otherwise untowable vehicles	(1)
44. 5-gallon can with lid filled with clean absorb-all	(1)
45. Empty trash can with lid (5 gallon)	(1)
46. Lock out set	(1)

Each Freeway Service Patrol truck will be required to have a toolbox with the following minimum number of tools/supplies. A tool kit for small equipment items is required. The list may be supplemented at the Contractor's option and expense.

47. Screwdrivers--	
i. Standard-1/8", 3/16", 1/4", 5/16"	(1 each, min).
ii. Phillips head - #1 and #2	(1 each, min).
48. Needle nose pliers	(1)
49. Adjustable rib joint pliers, 2" min. capacity	(1)
50. Crescent wrench - 8"	(1)
51. Crescent wrench - 12"	(1)
52. 4 lb. hammer	(1)
53. Rubber mallet	(1)
54. Electrical tape, roll	(1)
55. Duct tape, 20 yard roll	(1)
56. Tire pressure gauge	(1)
57. Mechanic's wire (roll)	(1)
58. Bolt cutters	(1)

The vehicle operator shall be required to complete a pre-operation inspection of the vehicle as well as inventory the required equipment prior to the start of each shift. An inspection/inventory sheet shall be completed by the vehicle operator prior to the start of each shift and be available for inspection. The inspection sheets must be kept on file at the Contractor's office and available for CHP inspection upon request. Any item missing must be replaced prior to the start of the shift. All equipment stored on top of the truck shall be secured to the truck.

B. Spare Vehicles:

The Contractor shall be required to have one spare certified FSP tow truck available per beat. The spare vehicle should be used when a regular vehicle is unavailable. The spare vehicle shall be painted white in color with the required identification markings, title, and logo. It shall meet all the vehicle equipment specifications.

C. Vehicle Breakdown and Other Missed Service:

The spare vehicle must be in service on the beat within 45 minutes of the time a permanently dedicated vehicle is taken out of service for any reason. The Contractor shall not be paid for the time period that the contractually required trucks are not in service. If a vehicle is not made available within the 45 minute time period, the Contractor shall be fined three (3) times the hourly contract rate in 1minute increments until a replacement vehicle is provided. If a truck is not ready due to breakdown at the start of a shift, the fine time will be calculated from the start of the shift. If the entire shift is missed, Contractor shall be fined for the entire shift at three (3) times the hourly rate. Vehicle maintenance will be performed during non-service hours.

D. Vehicle Identification:

It shall be the vehicle operator's responsibility to place detachable Freeway Service Patrol markings on each vehicle during the service hours and to remove the detachable markings immediately upon completion of each shift. SANBAG will supply each Contractor with the appropriate number of

detachable markings for each beat(s). If a marking is lost or damaged, the Contractor shall be responsible for the cost of the replacement markings. All Freeway Service Patrol markings shall be returned at the termination of the contract. The cost of any SANBAG and/or Caltrans/CHP supplied item and/or equipment not returned shall be deducted from the Contractor's final payment.

Freeway Service Patrol markings as well as vehicle numbers shall be required on both sides of all trucks. The vehicle operator shall be required to keep the title and logos clean and in readable condition throughout the service patrol's operation.

E. Communications Equipment:

Each Freeway Service Patrol vehicle shall be equipped with various communication devices that will enable the vehicle operator to communicate with the CHP Communications Center. All vehicles shall be equipped with an Automatic Vehicle Location (AVL) system, radios, and handheld/PDAs for text messaging, email, and data collection. The AVL system, radios, GPS, handheld/PDA equipment shall be purchased, owned and supplied by SANBAG. SANBAG shall select the equipment installation vendor.

The Contractor shall be responsible for maintaining the security of the vehicle communication equipment. The Contractor shall be liable for any damage other than normal wear and tear to the communication equipment. The Contractor shall also be liable for the full replacement value of the communication equipment installed in the trucks while in the care, custody and control of the equipment. SANBAG shall pay for repair fees for normal wear and tear to equipment. However, SANBAG will deduct repair fees as well as the full replacement cost of any SANBAG equipment due to improper use or negligence by the Contractor from any payment due to the Contractor under this agreement. SANBAG supplied vehicle equipment shall be returned upon contract termination. The cost of any equipment not returned shall be deducted from the Contractor's final payment. Programmable scanners capable of scanning between the 39 and 48 MHz used by CHP shall be supplied by the Contractor and shall be installed in all vehicles. The contractor is also required to use Nextel cell phones for communications with CHP Communications Center and CHP

Field Supervisor. Nextel cell phones shall be purchased and maintained by contractor. Contractor will also be responsible for all operating costs as well.

The FSP vehicles shall be equipped with a public address system. The public address system shall have the capability for the driver of the disabled vehicle to hear instructions transmitted from the cab of the Freeway Service Patrol vehicle when the FSP vehicle is adjacent to the rear of the disabled vehicle.

The Contractor shall purchase and maintain a computer workstation with high speed internet access and email to communicate with SANBAG staff, and transfer FSP data collected with handheld/PDA units. Handheld/PDA units will need to be downloaded at the end of each shift to the computer workstation; therefore the computer workstation will need to be easily accessed by drivers after each shift. The computer workstation shall be a PC Pentium4 2.4Ghz or AMD Athlon XP 2800 or greater based machine with at least 256MB memory, 10 gig hard drive, network card, CDROM, IrDA Infrared port (or USB IrDA Infrared Adaptor), optical mouse, keyboard and monitor. Computer workstation shall be equipped with the following software; Windows XP, AntiVirus software (Norton, McAfee, Trend Micro), email software, and Microsoft Access (version 2002 or greater).

F. Vehicle Operators:

All potential vehicle operators shall be required to have a safe driving record and current Class C driver's license. All vehicle operators shall be 18 years of age or older. Potential vehicle operators shall be subject to driving record and criminal background checks through the California Highway Patrol. Potential vehicle operators shall be sufficiently experienced in the tasks of tow truck operations and proficient with all required Freeway Service Patrol equipment to provide safe and proper service. Any certified driver from other FSP areas will be evaluated on a case by case basis. All potential vehicle operators must be capable of demonstrating their tow operating abilities prior to formal CHP training. Additionally, the vehicle operators will be required to exercise good, sound judgment in carrying out their duties.

Vehicle operators shall be required to inform the CHP Communications Center at any time he/she leaves the assigned beat for more than ten (10) minutes. This includes replenishing expendable items such as gasoline, fire extinguisher, breaks, etc. The vehicle operator shall be required to immediately notify the CHP Communications Center upon a tow truck breakdown. The Freeway Service Patrol vehicle operator shall be required to complete assist records for each incident.

The CHP, Caltrans, and SANBAG maintain strict drug and alcohol policies. Contractors shall have an alcohol and drug program that includes at a minimum, a drug and alcohol free workplace policy, and an employee alcohol/drug-testing program. Any Freeway Service Patrol vehicle operator found working under the influence of drugs or alcohol shall be immediately removed from the FSP program by the Contractor. The Contractor shall be responsible for providing a certified replacement driver for that vehicle.

The Contractor shall also be an active participant in the DMV Pull Notice Program.

If a vehicle operator is convicted of a crime involving a stolen vehicle, stolen property, violence, drugs or moral turpitude, fraud related to the towing business, or misdemeanor or felony driving while under the influence of alcohol or a drug, the Contractor shall permanently remove that vehicle operator from duties under the FSP program. If a vehicle operator is charged with any of the above crimes, the Contractor shall immediately suspend that vehicle operator from duties under this program pending the outcome of the criminal case. If the vehicle operator is not convicted, or is ultimately convicted of a lesser crime not described above, the SANBAG retains the right to have the Contractor remove that vehicle operator from the duties under the FSP program.

All vehicle operators, including back-up drivers, shall be required at Contractor's expense to complete the CHP two-day training program which costs up to $50.00 per driver. Contractors shall pay all Freeway Service Patrol operators and back-up drivers for attending the training. No driver will be allowed to begin patrolling without attending the mandatory training classes. Any vehicle operator who is found on patrol

without completing the mandatory training classes may be prohibited from further Freeway Service Patrol service and the Contractor's contract may be terminated immediately.

Mandatory CHP refresher training classes shall be scheduled during non-Freeway Service Patrol hours. A minimum of eight (8) hours refresher training per year shall be required (at Contractor's expense).

Vehicle operators will be required to utilize a Handheld/PDA to input information about each assist; which will include location, vehicle make, model, license number, type of assistance provided, etc. Vehicle operators will be trained on using Handheld/PDA units to enter data using SANBAG data collection software, and using a Handheld/PDA unit to communicate with CHP staff while in the field.

G. Operator Equipment:

It shall be the responsibility of the Contractor to provide the vehicle operator with specified uniforms, shoes, and other equipment. The equipment includes navy blue jump suits or shirts and pants. If coveralls are worn they shall have two-way zip front with heavy duty brass zipper. Coverall or shirt sleeves shall be half raglan type or set-in sleeve with pleated-action back. Long sleeves may have plain barrel cuff or be equipped with snap or button closure on wrist. The length of the sleeve on short-sleeve coveralls/shirts shall come to within approximately 1 inch of the inside forearm when the wearer's arm is bent at a 90 degree angle.

The coveralls shall have shape holding sanforized waist banding with elastic inserts for trim fit. Legs shall be moderately tapered to avoid excessive fullness. H.D. Lee Company style No. 018-3041 (Navy Blue) or Commercial Uniform Co. style No. 201 (Navy Blue) or equal. All main seams shall be at least double stitched with good quality thread.
Shirts or coveralls shall have one or two chest pockets. Single pocket coveralls/shirts shall have the chest pocket placed on the left.

The first initial of the first name and full last name shall be sewn above the right chest pocket so that it shall be clearly visible with the collar open. Letters shall not exceed ½ inch. A

detachable metal nameplate may be worn in place of the embroidered name at the Contractor's option.

A safety vest with reflective white stripes shall be worn. The safety vest shall be orange or lime-green in color. A small Freeway Service Patrol logo (patch) shall be sewn on the front of the safety vest over the left front pocket of the uniform. A large Freeway Service Patrol logo (patch) shall be sewn across the middle portion of the back of each safety vest. The name of the vehicle operator shall be displayed on the front of the safety vest over the right front pocket of the uniform. The safety vests and Freeway Service Patrol logos (patches) will be provided by SANBAG.

All Freeway Service Patrol vehicle operators shall wear general duty black work boots with protective steel toe.

During cold weather, a navy blue sweater or sweatshirt may be worn under the uniform shirt/jumpsuit. A navy blue jacket may also be worn at the Contractor's option, if it meets all the uniform specifications.

Rain gear shall be waterproofed material, yellow in color. Reflective 2" white tape shall be applied to both sleeve cuffs and both leg cuffs and across the upper back.

Hats, if worn, shall be baseball type cap, navy blue in color. An "FSP" shoulder patch shall be sewn on the hat above the brim. No other logos/names shall be accepted. A picture of the uniform is provided in Attachment "A", FSP Uniform Requirements.

H. Local Office:

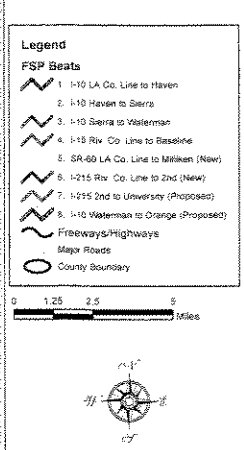
The Contractor shall provide a local office for contract administration purposes. This office shall be staffed by either the Contractor or a person who has the authority to conduct business and make decisions on behalf of the Contractor. The office shall have business hours coinciding with Contractor's beat(s) hours of operation. Through the Proposal document shown in Attachment "B", Contractor Representative Form, the Contractor shall designate representatives who will be available at the office during hours of operation to make decisions on behalf of the Contractor. The office shall be established within

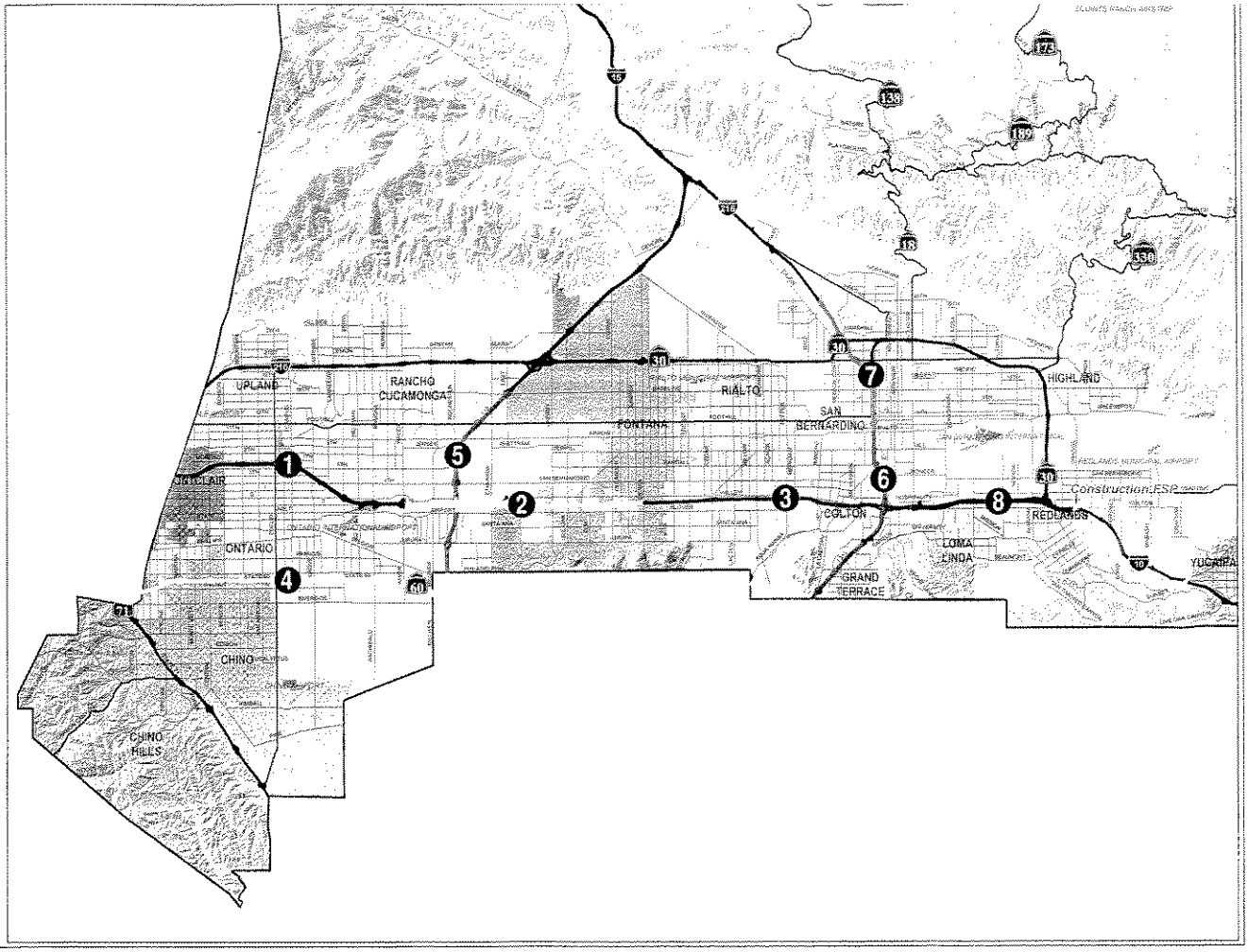
close proximity to the Contractor's beat(s) and be located within Riverside, San Bernardino, Los Angeles or Orange Counties. Also note on page 7, Section 4.4C, a backup vehicle must be available within a 45 minute request of the beat area. This requirement may also determine if the local office is close enough to satisfy the requirements under this section as well.

The Contractor shall also provide **telephone and fax service, and email** through which he/she or a responsible representative who has the authority to conduct business and make decisions on behalf of the Contractor can be contacted during the non-service hours of operation for the length of the contract. During non-business hours, an answering machine provided at the Contractor's expense, shall be available to log calls, take complaints, etc. A **fax machine and an email address** shall be provided for noticing purposes.

Freeway Service Patrol

San Bernardino FSP
Existing & Proposed Beat Locations
July 2006





Governments SANBAG Working Together

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TRANSPORTATION MEASURE I

•San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies

Minute Action

AGENDA ITEM: **10**

Date: July 19, 2006

Subject: Measure I 2010-2040 Strategic Plan Workshop on Project Cost Estimates and Revenue Projections

Recommendation:* For purposes of further Measure I 2010-2040 Strategic Plan development, accept:

1) Expenditure Plan project cost increases as discussed at the workshop and detailed in this item, and

2) Revised Measure I 2010-2040 revenue projection of $8.0 billion in 2006 dollars, up from $6.0 billion in 2003 dollars per the Expenditure Plan.

Background: On May 31, 2006, the Board of Directors held the first of several Measure I 2010-2040 Strategic Plan development workshops to receive information on and lessons learned from past Measure I strategic planning and policy development, and to gain acceptance of substantial increases to project costs that have occurred since Expenditure Plan project data were compiled in 2002 and 2003 as well as more modest increases to Measure I sales tax revenues. Presentations and detailed documentation of changes to both project costs and sales tax revenue forecasts have been presented at past meetings the Plans and Programs Committee, but similar detail was not provided at the workshop because of the breadth of material that was covered during the three hour meeting. At the workshop, Board members requested circulation of the detailed support material through policy committees for further review by Board members and their staff. Following the cancellation of the June Plans and Programs Policy Committee, this

Approved
Plans and Programs Policy Committee

Date: _____

Moved: *Second:*

In Favor: *Opposed:* *Abstained:*

Witnessed: _____

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item was taken to the full Board of Directors at its July meeting. There, staff was directed to take the item back to the Plans and Programs Committee for a recommendation to the Board of Directors. This item responds to that direction. The material contained herein has also been considered by the CTP Technical Advisory Committee. Attachment A is the support material on cost escalation, including the methodology for development of project cost estimates. Attachment B is support material for the revised revenue forecast, including a report by Dr. John Husing and additional information on demographic and economic factors supplied by staff. Attachment C is an article from the June 26, 2006 Engineering News-Record on the basis for continuing high levels of construction cost escalation.

Board members in attendance at the workshop developed written questions for further discussion. These are shown below, accompanied by preliminary responses from staff:

1. ***When do we explore bonding for projects to move up delivery times (and hopefully reduce costs)?*** There are many issues that need to be addressed before bond financing can be considered. The first major issues are the timing and magnitude of the need for construction funds. None of the Valley Major Projects – including I-215 South - will be ready to go to construction until sometime in the next decade. It is the project development and environmental clearance process that comprises the critical path for these projects rather than the availability of construction funding. There is no reason to bond finance if the projects are not ready for construction, and it is difficult as yet to forecast the exact timing of project delivery because of the vagaries of the NEPA process to which all these projects will be subjected. In addition, it would be unwise to incur the cost of bonding if the construction expenditure requirements are projected to not exceed Measure I and other state and federal program funding. That said, the strategic plan is likely to reflect a need for bond financing for projects that are cleared for construction in the next decade because staff believes that several large projects can be made shelf-ready within a few years of one another, and their cost is likely to exceed our ability to pay-as-you-go. These factors will be considered in the analysis of bond financing alternatives presented as part of the strategic plan. Depending on the timing and certainty of the bond financing requirements, hedging strategies will also be analyzed.

2. ***Absent sufficient capital to build the needed infrastructure, will there be social or regulatory controls that lessen traffic in the next decade?*** If transportation system capacity cannot meet transportation demand, it is expected to negatively affect quality of life and economic vitality. Absent wholesale technological change, the resulting congestion will impact environmental quality as well. Absent regulatory controls, travel demand in this case will be "managed" in a de facto sense by the added cost of time lost to congestion. Alternatively, demand could be managed through imposition of time-of-day fees for use of the system during periods of highest demand when capacity is most valuable. The regulation of demand by congestion imposes delay equally, but cost of that delay can vary widely, as in the case of a joy-rider versus an emergency response vehicle.

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3. ***Do we need further clarification on adjustment of developer mitigation/nexus fees and possible increases for municipalities to impose?*** Annual adjustments to development contributions to keep pace with escalation or de-escalation of project costs are a requirement of fair-share development mitigation programs. In the long term, if project costs escalate faster than revenues, a challenge to be addressed through the Strategic Plan is maintenance of adequate public match on projects for which development contributions have been collected. This could appropriately be accomplished through state and federal transportation funding levels that are better aligned with need.

4. ***Valley Expenditure Plan 1990-2010 – Does 2% cover all the environmental mitigation costs including any done by local jurisdictions?*** The 2% Valley Traffic Management/Environmental Enhancement Program (TMEE) funds do not and were never intended to fund mitigation of the direct impacts of transportation projects. Instead, it is used principally as "seed money" to leverage other resources. Direct impact mitigation is considered part of the project cost. "Indirect" or "induced growth" impacts of transportation projects, however, are not included in project costs and should probably be funded with non-transportation resources.

5. ***Can we combine projects for environmental study (by areas or by entire projects rather than phases)?*** We are generally required to prepare environmental analyses for entire projects rather than phases. For very large projects designed and constructed over many years, this often means that in addition to the original environmental document prepared for the entire facility, periodic environmental re-evaluations are required to ensure that the analysis is current and that any scope changes through time are considered.

6. ***What should be the financial contribution of Nevada, Arizona and points east to I-15?*** Nevada contributed $10 million to the I-15 widening between the Victor Valley and Barstow. Prior to that, Nevada interests also contributed $4m for I-15 widening through Barstow and were actively involved in gaining Congressional discretionary earmarks for San Bernardino transportation improvement projects. We hope they continue to contribute to projects of mutual benefit such as the Devore Interchange in the future.

7. ***What are the cost estimates for I-10 and I-15 based upon? (2006 Cost estimate is 300% higher than Caltrans current estimate on I-10 HOV .... $1.25 billion vs. $400 million)*** The basis for SANBAG's cost estimate for the I-10 project is detailed in Attachment A of this item. It should be noted that in addition to higher materials costs, the scope (length) of the Expenditure Plan project is greater than was contemplated by Caltrans.

8. ***What is the status of Riverside County's "215 South" project? Are they still committed to the project?*** Project development work on the I-215 South project is in progress, and it is hoped that it will be ready to go to construction by about 2012, subject to timely completion of the NEPA document and completion

of design. Riverside continues to be committed to the project, although that situation should be monitored.

9. ***Can we use Regional/Major street funds for local streets?*** Valley Major street funds are to be allocated to projects by action of the SANBAG Board of Directors. It is not envisioned that funds intended for improvements to regionally significant Valley arterial roadways will be allocated to local street projects. The Mountain/Desert Expenditure Plan provides that the Mountain/Desert Committee could make a finding, after five years of revenue collection, that Major Local Highway Project funds are not required for Major Local Highway Projects in specific subareas. In such a case, the Major Local Highway Projects revenue can be returned to jurisdictions in such subareas for local streets. Staff believes this is unlikely given the extensive list of known projects in all subareas.

10. ***Are Public Private Partnership revenues in the projected plan?*** No. It appears likely that two or more major highway projects will be capitalized, constructed, and operated by private entities, but neither the full costs of these projects nor the private revenues were included in the Expenditure Plan. The Expenditure Plan does call for modest contributions to development and environmental clearance of these facilities as needed to control risk and render them attractive to private investment.

11. ***Do we want to get projects shelf ready?*** Yes. Given the vagaries of the environmental clearance process, the need to identify, protect, and acquire right-of-way at the earliest possible time, and the benefits of having a "shelf" of projects to take advantage of special funding opportunities, staff believes it is clearly in our interest to proceed with simultaneous project development on several and varied projects.

12. ***How comfortable are we with the projection of cost escalation?*** The project cost escalation information presented to date are historic (not forecast) data, based on actual records, and substantiated with data from member agencies in both the Valley and Victor Valley areas of San Bernardino County. As noted in the presentations, the project costs are based on engineering estimates under today's conditions and in today's dollars. This enables us to compare costs with revenues that are also calculated in today's dollars. Prior to final design and consideration of actual right-of-way needs, the costs can only be considered estimates, but they reflect standard engineering practice and judgement.

13. ***How is performance factored in?*** Following acceptance of cost and revenue updates, the strategic planning effort will focus on project prioritization policies and procedures to guide the allocation of Measure I and other revenues considered in the Expenditure Plan. The relative performance of competing projects as measured by benefit/cost or other criteria would clearly be among the factors considered, although other criteria such as project readiness and geographic equity will be considered as well.

This item is to be scheduled for further discussion at the July Board of Directors meeting, and issues specific to the Mountain/Desert Subregion will be discussed in more detail at the Mountain/Desert Committee meeting in July. Interaction among programs, project prioritization, project sequencing, and integration of development financing will be among the next topics to be discussed in the Strategic Plan development process.

Financial Impact: This item is consistent with the approved Fiscal Year 2005-2006 Budget.

Reviewed By: This item was presented as information only to the Board of Directors on July 5, 2006. It will be reviewed by the Plans and Programs Policy Committee on July 19, 2006.

Responsible Staff: Ty Schuiling, Director of Planning and Programming

ppc0607a-ty.doc
Attachments: brd0605c2-ty; Strategic Plan – Basis of Cost for Major Projects Cajon and Mountain Desert – 060614.doc
0660110

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San Bernardino Associated Governments

Measure I Growth Forecast
FY 2006 to FY 2040

Compiled By

John E. Husing, Ph.D.

April 17, 2006

Final

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San Bernardino Associated Governments

Measure I Growth Forecast: FY 2000 to FY 2040

Executive Summary

Forecast Summary. The attached forecast has the following conclusions:

- SANBAG earned net revenue of $1,152,839,000 during the 15-years including FY 90-91 through FY 04-05.
- In the remaining 5-years of Measure I (*FY 05-06 to-FY 09-10*), the estimated net amount of the tax would be another $744,690,000 in constant 2005 dollars.
- For the full 20-years of Measure "I", the total net revenue is thus estimated at $1,897,529,000.
- For the 30-years of the extended Measure "I", the net revenue is estimated at $8,352,430,000 in constant 2005 purchasing power.
- Including the last five years of the original Measure "I" (*$744,690,000*), the total anticipated constant dollar anticipate net revenue of $9,097,119,000.

Accuracy Summary. The accuracy of the forecast depends upon the accuracy and pattern of the following assumptions:

- Population Growth is that assumed by SCAG's 2008 RTP forecasting committee.
- Per Capita Taxable Sales Growth, not including inflation, will be 3.58% in normal or good times and 0.00% in two-year recessions for the next nine years. This will fall to 2.75% with two recession years for the next nine years (*FY 15-FY 23*) as the economy matures and then 1.75% with four recession years during the next 17-years with complete economic maturity (*FY 24-FY40*).
- Rate of CPI inflation growth of 0.00% is assumed so the forecast is in 2005 purchasing power.
- The difference between "point of sale" retail sales and "point of delivery" retail sales is 5.8% except a period when it will go from 4.76% in FY 04-05 up to 5.8% in FY 09-10, rising in 0.25% per year increments.
- SBOE fees growth are 1.5% of net revenue to SANBAG.
- There will be nothing like the restructuring caused by the end of the Cold War, as there is no parallel vulnerability in the economy.

Conservative Bias. The calculations have a conservative bias as the changes occurring in the San Bernardino's economy in 2005 will likely lead to increases in the assumed 3.58% rate of increase in per capita constant dollar retail sales spending through FY 14. The 2.75% in FY 15 and 1.75% in FY 24 as the county's economy matures appear likely. With recessions, these rates yield compound growth in each period, respectively, of 2.75%, 2.15% and 1.34%.

Forecast Calculation. Exhibit 1 on the next two pages presents the forecast calculations. FY 89-90 to FY 04-05 are historical. FY 05-06 to FY 39-40 are estimated. The relevant forecasting assumptions are given at the top of each column, with summary statements about them in the exhibit footnotes. The exhibit's creation is explained in depth by the discussion following the exhibit.

Exhibit 1, SANBAG Measure I - 1/2 Cent Sales Tax Receipts, Past & Forecasted FY 1990 to FY 2010

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Fiscal Year	Population		Per Capita Sales No inflation		Real Taxable Sales No inflation		Consumer Prices		Taxable Sales Current $		Point of Delivery			SANBAG Revenue			
	Jan. 1st	Growth	Taxable	Growth	(000)	Growth	CPI	Growth		Growth	Percent	Difference	Current $	Gross Current $	SBOE Fee	Net Current $	Change
			FY 05=100		FY 05=100		FY 05 =100		(000)				(000)	(000)	(000)	(000)	
Source	Exhibit 2	Exhibit 2	Exhibit 3	Exhibit 3	#2 * #4	% #6	Exhibit 4	Exhibit 4	#6 * #8		0.25%	#10*#12	#10-#13	#14*0.5%	#17 x	#15/1.015	%#17
Factor	SCAG			3.58%			0.0%				5.8%			0.50%	1.5%		
89-90	1,418,380		$11,779		$16,706,734		66.9%		$11,181,155							$4,126	NA
90-91	1,463,068	3.2%	10,714	-9.0%	15,675,010	-6.2%	70.6%	5.4%	11,058,747	-1.1%	-0.60%	(66,053)	11,124,800	55,624	$844	$54,780	NA
91-92	1,516,250	3.6%	10,126	-5.5%	15,354,026	-2.0%	73.1%	3.6%	11,219,925	1.5%	3.06%	342,925	10,877,000	54,385	601	53,784	-1.82%
92-93	1,546,375	2.0%	9,516	-6.0%	14,714,913	-4.2%	75.5%	3.3%	11,104,479	-1.0%	-0.10%	(10,921)	11,115,400	56,577	829	54,748	1.79%
93-94	1,561,875	1.0%	9,495	-0.2%	14,829,596	0.8%	76.8%	1.8%	11,387,941	2.6%	1.34%	152,341	11,235,600	56,178	1,336	54,842	0.17%
94-95	1,573,975	0.8%	9,926	4.5%	15,623,228	5.4%	78.0%	1.6%	12,183,700	7.0%	2.71%	330,500	11,853,200	59,266	1,305	57,961	5.69%
95-96	1,590,825	1.1%	10,219	3.0%	16,256,501	4.1%	79.0%	1.3%	12,847,359	5.4%	1.33%	170,759	12,676,600	63,383	1,346	62,037	7.03%
96-97	1,613,700	1.4%	10,399	1.8%	16,781,280	3.2%	80.6%	2.0%	13,522,531	5.3%	1.91%	258,331	13,264,200	66,321	1,474	64,847	4.53%
97-98	1,637,900	1.5%	10,737	3.2%	17,585,613	4.8%	81.7%	1.4%	14,371,462	6.3%	1.40%	201,262	14,170,200	70,851	1,431	69,420	7.05%
98-99	1,666,555	1.7%	11,438	6.5%	19,062,211	8.4%	83.2%	1.8%	15,852,872	10.3%	6.22%	985,672	14,867,200	74,336	1,092	73,244	5.51%
99-00	1,710,139	2.6%	12,234	7.0%	20,922,243	9.8%	85.5%	2.8%	17,885,700	12.8%	7.56%	1,352,700	16,533,000	82,665	1,229	81,436	11.18%
00-01	1,747,822	2.2%	12,502	2.2%	21,851,659	4.4%	88.7%	3.7%	19,376,056	8.3%	5.80%	1,124,456	18,251,600	91,258	1,271	89,987	10.50%
01-02	1,794,507	2.7%	12,263	-2.0%	21,987,435	0.6%	91.2%	2.8%	20,050,622	3.5%	4.48%	899,029	19,151,593	95,758	1,300	94,458	4.97%
02-03	1,842,904	2.7%	12,572	2.6%	23,169,069	5.4%	93.9%	3.0%	21,753,274	8.5%	4.67%	1,016,680	20,736,594	103,683	1,532	102,151	8.14%
03-04	1,897,950	3.0%	13,225	5.2%	25,101,190	8.3%	96.1%	2.3%	24,120,368	10.9%	7.13%	1,719,058	22,401,310	112,007	1,655	110,351	8.03%
04-05	1,946,202	2.5%	14,105	6.7%	27,451,086	9.4%	100.0%	4.1%	27,451,086	13.8%	4.76%	1,306,037	26,145,049	130,725	1,932	128,793	16.71%
FY 91 to FY 05		**2.06%**		**1.98%**		**4.08%**			**$244,186,122**	**6.71%**		**$9,782,776**	**$234,403,346**	**$1,172,017**	**$19,177**	**$1,152,839**	**6.09%**
05-06	1,980,560	1.77%	14,609	3.58%	28,934,738	5.4%	100.0%	0.0%	28,934,738	5.4%	5.01%	1,448,961	27,485,800	137,429	2,031	135,398	5.13%
06-07	2,015,525	1.77%	15,132	3.58%	30,498,577	5.4%	100.0%	0.0%	30,498,577	5.4%	5.26%	1,603,520	28,895,100	144,476	2,135	142,340	5.13%
07-08	2,051,107	1.77%	15,673	3.58%	32,146,936	5.4%	100.0%	0.0%	32,146,936	5.4%	5.51%	1,770,553	30,376,400	151,882	2,245	149,637	5.13%
08-09	2,087,318	1.77%	16,233	3.58%	33,884,385	5.4%	100.0%	0.0%	33,884,385	5.4%	5.76%	1,950,957	31,933,400	159,667	2,360	157,307	5.13%
09-10	2,124,167	1.77%	16,233	0.00%	34,482,581	1.8%	100.0%	0.0%	34,482,581	1.8%	5.80%	2,001,278	32,481,300	162,407	2,400	160,006	1.72%
FY 05 to FY 10		**1.77%**		**2.85%**		**4.67%**		**0.00%**	**$159,947,217**	**4.67%**		**$8,775,269**	**$151,172,000**	**$755,860**	**$11,170**	**$744,690**	**6.60%**
FY 90 to FY 10		**2.04%**		**1.62%**		**3.69%**		**2.03%**	**$404,133,339**	**5.79%**		**$18,558,045**	**$385,575,346**	**$1,927,877**	**$30,348**	**$1,897,529**	**5.80%**

2. Population growth rates from Exhibit 2. Population from January 1, 2006-2010 is from preliminary work for SCAG's 2008 forecast Regional Transportation Program by its Forecast Committee.

4. Estimated FY 06-FY 10 per capita constant dollar retail sales growth at 3.58% based on average from FY 95-FY 05 in Exhibit 3, except 0.00% in FY 10 due to assumed recession.

6. CPI assumed constant from FY 06-FY 10. Historical CPI data is in Exhibit 4. It was used to deflate per capita retail sales in each year from FY 91 to FY 05.

12. 5.8% difference between Sales at "point of sale" vs. Sales at "point of delivery" based upon FY 99 to FY 05 average. From FY 2005 to FY 10 , it rises at 0.25% per year to the 5.8% level.

16. State Board of Equalization fee assumed to be 1.5% of the actual receipts of SANBAG in #17. That is 1.5% is based upon the actual share from FY 91 to FY 05.

17 SANBAG point of receipt figure in #15 divided by (1+1.5%). This yields SANBAG actual receipts less SBOE fee.

Exhibit 1 (continued).-SANBAG Measure I - 1/2 Cent Sales Tax Receipts, Past & Forecasted FY 2011 to FY 2040

Fiscal	Population		Per Capita Sales No Inflation		Real Taxable Sales No Inflation		Consumer Prices		Taxable Sales Current $		Point of Delivery			SANBAG Revenue			
											Percent	Difference	Current $	Gross	SBOE	Net	Change
Year	Jan. 1st	Growth	Taxable	Growth	(000)	Growth	CPI	Growth		Growth				Current $	Fee	Current $	
			FY 05=100		FY 05=100		FY 05 =100		(000)					(000)	(000)	(000)	
Source	Exhibit 2	Exhibit 2	Exhibit 3	Exhibit 3	#2 * #4	% #6	Exhibit 4	Exhibit 4	#6 * #8			#10*#12	#10-#13	#14*0.5%	#17*		% #17
Factor	SCAG			Note #4				0.00%			5.8%			0.50%	1.5%	#15/1.015	
FY 90 to FY 10		**2.04%**		**1.62%**		**3.69%**		**2.03%**	**$404,133,339**	**5.79%**		**$18,558,045**	**$385,575,346**	**$1,927,877**	**$30,348**	**$1,897,529**	**6.80%**
10-11	2,159,000	1.66%	$16,200	0.00%	$34,975,800	1.4%	100.0%	0.0%	$34,975,800	1.4%	5.80%	$2,029,900	$32,945,900	164,730	2,434	162,295	1.43%
11-12	2,195,000	1.66%	16,800	3.58%	36,876,000	5.4%	100.0%	0.0%	36,876,000	5.4%	5.80%	2,140,200	34,735,800	173,679	2,567	171,112	5.43%
12-13	2,231,000	1.66%	17,400	3.58%	38,819,400	5.3%	100.0%	0.0%	38,819,400	5.3%	5.80%	2,253,000	36,566,400	182,832	2,702	180,130	5.27%
13-14	2,268,000	1.66%	18,000	3.58%	40,824,000	5.2%	100.0%	0.0%	40,824,000	5.2%	5.80%	2,369,300	38,454,700	192,274	2,841	189,432	5.16%
14-15	2,306,000	1.66%	18,500	2.75%	42,661,000	4.5%	100.0%	0.0%	42,661,000	4.5%	5.80%	2,475,900	40,185,100	200,926	2,969	197,956	4.50%
15-16	2,339,000	1.42%	19,000	2.75%	44,441,000	4.2%	100.0%	0.0%	44,441,000	4.2%	5.80%	2,579,200	41,861,800	209,309	3,093	206,216	4.17%
16-17	2,372,000	1.42%	19,500	2.75%	46,254,000	4.1%	100.0%	0.0%	46,254,000	4.1%	5.80%	2,684,500	43,569,500	217,848	3,219	214,628	4.08%
17-18	2,406,000	1.42%	20,000	2.75%	48,120,000	4.0%	100.0%	0.0%	48,120,000	4.0%	5.80%	2,792,800	45,327,200	226,636	3,349	223,287	4.03%
18-19	2,440,000	1.42%	**20,000**	**0.00%**	**48,800,000**	**1.4%**	100.0%	0.0%	**48,800,000**	**1.4%**	**5.80%**	**2,832,200**	**45,967,800**	229,839	3,397	226,442	**1.41%**
19-20	2,475,000	1.42%	**20,000**	**0.00%**	**49,500,000**	**1.4%**	100.0%	0.0%	**49,500,000**	**1.4%**	**5.80%**	**2,872,800**	**46,627,200**	233,136	3,445	229,691	**1.43%**
20-21	2,506,000	1.27%	20,600	2.75%	51,623,600	4.3%	100.0%	0.0%	51,623,600	4.3%	5.80%	2,996,100	48,627,500	243,138	3,593	239,544	4.29%
21-22	2,538,000	1.27%	21,200	2.75%	53,805,600	4.2%	100.0%	0.0%	53,805,600	4.2%	5.80%	3,122,700	50,682,900	253,415	3,745	249,669	4.23%
22-23	2,570,000	1.27%	21,800	2.75%	56,026,000	4.1%	100.0%	0.0%	56,026,000	4.1%	5.80%	3,251,600	52,774,400	263,872	3,900	259,972	4.13%
23-24	2,603,000	1.27%	22,200	1.75%	57,786,600	3.1%	100.0%	0.0%	57,786,600	3.1%	5.80%	3,353,800	54,432,800	272,164	4,022	268,142	3.14%
24-25	2,636,000	1.27%	22,600	1.75%	59,573,600	3.1%	100.0%	0.0%	59,573,600	3.1%	5.80%	3,457,500	56,116,100	280,581	4,147	276,434	3.09%
25-26	2,666,000	1.16%	23,000	1.75%	61,318,000	2.9%	100.0%	0.0%	61,318,000	2.9%	5.80%	3,558,700	57,759,300	288,797	4,268	284,529	2.93%
26-27	2,697,000	1.16%	**23,400**	1.75%	**63,109,800**	**2.9%**	100.0%	0.0%	**63,109,800**	**2.9%**	**5.80%**	**3,662,700**	**59,447,100**	297,236	4,393	292,843	2.92%
27-28	2,728,000	1.16%	**23,400**	**0.00%**	**63,835,200**	**1.1%**	100.0%	0.0%	**63,835,200**	**1.1%**	**5.80%**	**3,704,800**	**60,130,400**	300,652	4,443	296,209	**1.15%**
28-29	2,760,000	1.16%	23,400	0.00%	64,584,000	1.2%	100.0%	0.0%	64,584,000	1.2%	5.80%	3,748,300	60,835,700	304,179	4,495	299,683	1.17%
29-30	2,792,000	1.16%	23,800	1.75%	66,449,600	2.9%	100.0%	0.0%	66,449,600	2.9%	5.80%	3,856,600	62,593,000	312,965	4,625	308,340	2.89%
FY 11 to FY 30		**1.38%**		**1.93%**		**3.33%**		**0.00%**	**$1,029,383,200**	**3.33%**		**$59,742,600**	**$969,640,600**	**$4,848,203**	**$71,648**	**$4,776,555**	**3.33%**
30-31	2,821,649	1.06%	24,217	1.75%	68,330,458	2.8%	100.0%	0.0%	68,330,500	2.8%	5.80%	3,965,700	64,364,800	321,824	4,756	317,068	2.83%
31-32	2,851,612	1.06%	24,640	1.75%	70,264,554	2.8%	100.0%	0.0%	70,264,600	2.8%	5.80%	4,078,000	66,186,600	330,933	4,891	326,042	2.83%
32-33	2,881,894	1.06%	25,071	1.75%	72,253,395	2.8%	100.0%	0.0%	72,253,400	2.8%	5.80%	4,193,400	68,060,000	340,300	5,029	335,271	2.83%
33-34	2,912,498	1.06%	25,510	1.75%	74,298,530	2.8%	100.0%	0.0%	74,298,500	2.8%	5.80%	4,312,100	69,986,400	349,932	5,171	344,761	2.83%
34-35	2,943,426	1.06%	25,957	1.75%	76,401,552	2.8%	100.0%	0.0%	76,401,600	2.8%	5.80%	4,434,100	71,967,500	359,838	5,318	354,520	2.83%
35-36	2,983,133	1.35%	26,411	1.75%	78,787,264	3.1%	100.0%	0.0%	78,787,300	3.1%	5.80%	4,572,600	74,214,700	371,074	5,484	365,590	3.12%
36-37	3,023,375	1.35%	26,411	0.00%	79,850,095	1.3%	100.0%	0.0%	79,850,100	1.3%	5.80%	4,634,300	75,215,800	376,079	5,558	370,521	1.35%
37-38	3,064,160	1.35%	26,411	0.00%	80,927,264	1.3%	100.0%	0.0%	80,927,300	1.3%	5.80%	4,696,800	76,230,500	381,153	5,633	375,520	1.35%
38-39	3,105,495	1.35%	26,873	1.75%	83,454,296	3.1%	100.0%	0.0%	83,454,300	3.1%	5.80%	4,843,500	78,610,800	393,054	5,809	387,245	3.12%
39-40	3,147,388	1.35%	27,343	1.75%	86,060,236	3.1%	100.0%	0.0%	86,060,200	3.1%	5.80%	4,994,700	81,065,500	405,328	5,990	399,337	3.12%
FY 31 to FY 40		**1.21%**		**1.40%**		**2.62%**		**0.00%**		**2.62%**		**$44,725,200**	**$725,902,600**	**$3,629,513**	**$53,638**	**$3,575,875**	**2.62%**
FY 11 To FY 40		**1.32%**		**1.75%**		**3.10%**		**0.00%**		**3.10%**		**$104,467,800**	**$1,695,543,200**	**$8,477,716**	**$125,286**	**$8,352,430**	**3.10%**

2. Population growth rates from Exhibit 2. Population from January 1, 2011-2040 is from preliminary work for SCAG's 2008 forecast Regional Transportation Program by its Forecast Committee.

4. Estimated FY 11-FY 40 per capita constant dollar retail sales growth at 3.58% based on average from FY 95-FY 05 in Exhibit 3, lowered to 2.75% in FY 14-15; and lowered to 1.75% in FY 23-24 to converge toward Orange County behavior. Two year recessions with 0.00% growth occur every nine years.

6. CPI assumed constant from FY 11-FY 40.

12. 5.8% difference between Sales at "point of sale" vs. Sales at "point of delivery" based upon FY 99 to FY 05 average.

16. State Board of Equalization fee assumed to be 1.5% of the actual receipts of SANBAG in #17. That is 1.5% is based upon the actual share from FY 91 to FY 05.

17 SANBAG point of receipt figure in #15 divided by (1+1.5%). This yields SANBAG actual receipts less SBOE fee

Population Growth. The starting point in calculating the Measure I growth forecast is San Bernardino County's population (*Exhibit 1, columns 2-3*). This is the case as there is a strong link between taxable sales and SANBAG's revenue and the county's population. According to the CA Department of Finance, January 1, 1990-2005, the population increased from 1,418,380 to 1,946,202 (*Exhibit 2*). San Bernardino County's population thus grew at a compound rate of 2.13% during the 15-year period (*FY 90-FY 05*). This period includes the deep recession at the end of the Cold War plus the ensuing recovery, the short recession (*FY 01-02*) and recent rapid expansion.

Exhibit 2.-Population Growth Rates & Compound Rate
San Bernardino County January 1st, Mid-Year

Year	DOF Population	%Growth	Year	SCAG Forecast	%Growth
1989-90	1,418,380	NA	2001-2	1,794,507	2.7%
1990-91	1,463,068	3.2%	2002-3	1,842,904	2.7%
1991-92	1,516,260	3.6%	2003-4	1,897,950	3.0%
1992-93	1,546,375	2.0%	2004-5	1,946,202	2.5%
1993-94	1,561,875	1.0%	SCAG 2008 RTP Preliminary Forecast		
1994-95	1,573,975	0.8%	2005-2010		1.77%
1995-96	1,590,825	1.1%	2010-2015		1.66%
1996-97	1,613,700	1.4%	2015-2020		1.42%
1997-98	1,637,900	1.5%	2020-2025		1.27%
1998-99	1,666,555	1.7%	2025-2030		1.16%
1999-00	1,710,139	2.6%	2030-2035		1.06%
2000-01	1,747,822	2.2%	2035-2040		1.35%
			FY 90-05 Compound Rate		2.13%

Source: CA Department of Finance SCAG 2008 Regional Transportation Program preliminary forecast

San Bernardino County's population growth is forecasted to grow 1.77% from FY 05-FY10, followed by gains of 1.66% from FY 10-FY 15, 1.42% from FY 15-FY20, 1.27% from FY 20-FY25, 1.16% from FY 25-FY 30, 1.06% from FY 30-FY 35 and 1.35% from FY 35-FY 40. These forecasts are the preliminary estimates of SCAG's forecasting working group for the 2008 Regional Transportation Program (*RTP*). The estimates are slightly faster than the forecasts for the 2004 RTP due to the county's most recent experience. They are based upon estimates of births, deaths and migration into the region. The general estimate of slowdowns is because of the anticipated baby boomer retirement period and the gradual reduction in available land.

Per Capita Taxable Sales, No Inflation. Given a certain number of people, the next step is to forecast how much taxable spending there will be for *each person*. In reviewing the historic data, the impact of price inflation was removed so that price increases could be disclosed as a separate variable in the forecast.

Exhibit 3 shows the taxable trade figures for San Bernardino County, from FY 90-FY 05 in column 6. The data are from the CA Board of Equalization. These numbers are divided by mid-year population during each fiscal year in column 7 to yield per capita taxable trade in column 8. The Los Angeles-Anaheim-Riverside Consumer Price Index (*FY 04-05 =100*) in column 9 is divided into these figures to yield the per capita taxable trade figures as if prices for each of these past years were at the level they had reached by FY 04-05.

Historically, *non-inflated* taxable trade per capita fell during Southern California's severe post-Cold War recession of the early 1990's. In the 10-year period from FY 94-95 to FY 04-05, growth returned with *non-inflated* per capita sales reacting to a variety of economic conditions: a halting recovery, a strong expansion, the FY 01-02 recession and the recent rapid expansion. For the period since FY 04-05, the compound rate was 3.58%. The early 1990's period is not included in forecasting because it represented an historical anomaly that will like not occur again. There is no sector of Southern California's economy that could shrink like the defense sector did during that period of time.

Exhibit 3.-Per Capita Retail Sales, Adjusted for Inflation
Fiscal Year FY 90-91 to FY 04-05 (*using FY 2005 = 100 dollars*)

1	2	3	4	5	6	7	8	9	10	11
	Taxable Trade					Population	Taxable Trade	CPI	Taxable Trade	
Fiscal Year	Qtr-3 (000)	Qtr-4 (000)	Qtr-1 (000)	Qtr-2 (000)	Fiscal Year (000)	Jan-1st mid-yr.	Per Capita	FY 05=100	Per Capita No Inflation	%Chg
1990-1	2,848,393	2,919,922	2,516,129	2,774,303	11,058,747	1,463,068	7,559	70.6	10,714	-9.04%
1991-2	2,866,381	2,913,549	2,565,200	2,874,316	11,219,925	1,516,250	7,400	73.1	10,126	-5.48%
1992-3	2,835,547	2,912,827	2,642,748	2,813,357	11,104,479	1,546,375	7,181	75.5	9,516	-6.03%
1993-4	2,804,500	2,971,193	2,694,287	2,917,961	11,387,941	1,561,875	7,291	76.8	9,495	-0.22%
1994-5	2,980,172	3,251,046	2,803,900	3,148,582	12,183,700	1,573,975	7,741	78.0	9,926	4.54%
1995-6	3,178,423	3,351,404	3,020,912	3,296,620	12,847,359	1,590,825	8,076	79.0	10,219	2.95%
1996-7	3,253,660	3,555,331	3,194,304	3,519,236	13,522,531	1,613,700	8,380	80.6	10,399	1.76%
1997-8	3,503,531	3,787,945	3,346,355	3,733,631	14,371,462	1,637,900	8,774	81.7	10,737	3.24%
1998-9	3,860,390	4,061,921	3,758,416	4,172,145	15,852,872	1,666,555	9,512	83.2	11,438	6.53%
1999-00	4,271,022	4,585,795	4,273,350	4,755,533	17,885,700	1,710,139	10,459	85.5	12,234	6.96%
2000-01	4,843,377	5,013,178	4,563,892	4,955,609	19,376,056	1,747,822	11,086	88.7	12,502	2.19%
2001-02	4,961,555	5,203,087	4,714,033	5,171,947	20,050,622	1,794,507	11,173	91.2	12,253	-2.00%
2002-03	5,327,336	5,636,186	5,134,813	5,654,939	21,753,274	1,842,904	11,804	93.9	12,572	2.61%
2003-04	5,804,353	6,005,842	5,823,646	6,486,527	24,120,368	1,897,950	12,709	96.1	13,225	5.20%
2004-05	6,725,871	7,170,123	6,517,210	7,037,882	27,451,086	1,946,202	14,105	100.0	14,105	6.65%
Compound Growth Rate Of Real Per Capita Sales FY 94-95 to FY 04-05										**3.58%**

Sources: Taxable Retail Sales, CA State Board of Equalization.; Los Angeles-Anaheim-Riverside Consumer Price Index, U.S. Bureau of Labor Statistics; Population, CA Department of Finance

With this entire experience in mind, San Bernardino County per capita taxable sales *without inflation* are forecasted to rise 3.58% per year in non-recession periods from FY 06-10. This is the growth rate in columns 4 & 5 of Exhibit 1. Every nine years, the modeling assumes that a two-year downturn will occur during which period there will be 0.00% in constant dollar per capita sales. On of these years affects FY 05-10, and leads to a compound rate of 2.85% for this period.

For the extended Measure "I":

- From FY 10-FY 14, the compound rate of 3.58% continues to apply as this completes a period the same length as the period for which that rate was derived. In addition, the aggressiveness of San Bernardino County's economy can be expected to exist as it closes retail gaps with the addition of high-end retail stores. Further, the county's upscale

housing stock will be attracting higher income residents. For this period, there is also one recession year. For the full FY 05-FY 14 period the rate of growth of constant dollar per capita retail sales would be 2.75% due to the two recession years. For reference, Orange County's forecast in this period puts its growth of this measure at 0.52%, an oddity.

- From FY 15 to FY 23, the rate of growth of constant dollar per capita retail sales in San Bernardino County is slowed to 2.75% as the county is assumed to become a more mature economy with a lower level of closing off of retail sales gaps occurring and the force of the migration of upper income families moderating. With the two recession years in this period, the actual compound growth rate is 2.15%. For reference, Orange County's forecast in this period puts its growth of this measure at 1.53%.
- From FY 24 to FY 40, the rate of growth of constant dollar per capita retail sales in San Bernardino County is slowed to 1.75% as the county is assumed to have now reached maturity. With the four recession years in this period, the actual compound growth rate is 1.37%. For reference, Orange County's forecast in this period puts its growth of this measure at 1.56%.

Total Taxable Sales, No Inflation. In Exhibit 1, each year's population (*column #2*) is multiplied by its non-inflated taxable sales per capita (*column #4*) to get the estimated **total taxable sales as if there was no inflation** from FY 05-06 to FY 39-40 (*column #6*). From FY 05-06 onward, the dual impact of growth rates in population and non-inflated per capita taxable sales drive the constant dollar taxable sales level.

Exhibit 4.-Consumer Price Index, LA-Anaheim-Riverside, Fiscal Years (2005 = 100)

1	2	3	4
Fiscal Year	CPI 1982-84=100	CPI FY 05=100	Change
1989-1990	131.9	66.9	
1990-1991	139.0	70.6	5.42%
1991-1992	144.0	73.1	3.58%
1992-1993	148.7	75.5	3.27%
1993-1994	151.3	76.8	1.76%
1994-1995	153.7	78.0	1.55%
1995-1996	155.7	79.0	1.34%
1996-1997	158.8	80.6	1.96%
1997-1998	161.0	81.7	1.42%
1998-1999	163.9	83.2	1.76%
1999-2000	168.5	85.5	2.79%
2000-2001	174.7	88.7	3.72%
2001-2002	179.7	91.2	2.84%
2002-2003	185.0	93.9	2.96%
2003-2004	189.4	96.1	2.35%
2004-2005	197.1	100.0	4.07%
FY 89-90 to FY 04-05 Compound Rate			3.15%

Note 1: FY 2005 reaches 197.1 on a 1982-1984=100 base. It serves as the denominator in creating the FY 2005=100 series.
Source: U.S. Bureau of Labor Statistics, forecast by Economics & Politics, Inc.

Consumer Price Index Increases. In order to make the constant dollar forecast of San Bernardino County's total taxable sales, it was necessary to determine the historical rate of increase in prices (*Exhibit 4*). Column 2 shows the actual Los Angeles-Anaheim-Riverside Consumer Price Index for the years from FY 89-90 (*131.9*) to FY 04-05 (*197.1*). These data are from the U.S. Bureau of Labor Statistics. They are on a 1982-1984=100 base. The estimated level for FY 04-05 of 197.1 is based upon the experience from July 2004 to June 2005. Dividing each number in column 2 by 197.1, gives the equivalent value of the index on a basis of FY 2005=100 base. This is done in column 3. The percentage changes of both columns are the same. The compound rate of inflation for this 16 year period was 3.15%.

Interpreting these data: if a basket of goods cost $100 in FY 2005, they would have cost $73.10 in FY 89-90 and $96.10 in FY 03-04. Note that prices rose 5.42% in Southern California between FY 89-90 and FY 90-91. The rise slowed dramatically during the middle 1990's but has been rising of late ending at a 4.07% gain in FY 04-05. Again, for the 16-year period, the compound rise was 3.15%.

Note: In the forecasting work, the rate of inflation is held constant since it affects both the revenue and cost sides of SANBAG's work. This allows the forecasts to be thought of in 2005 purchasing power terms. The difficulty is, of course, the fact that in recent years, costs have risen at much more than the inflation rate. Whether that will continue is an issue that policy makers must carefully weighing the conclusions of this report.

Total Taxable Sales, Including Inflation. SANBAG's revenues are based upon ½ percent of San Bernardino County's actual taxable sales. To estimate actual taxable sales in Exhibit 1, it is necessary to multiply the estimated price level (*column 8*) times the uninflated estimate of sales calculated earlier (*column 6*). The result appears in column 10. Since inflation is held constant in future years, the constant and current dollar taxable sales data are identical from years FY 05-06 to FY 39-40.

For historic years from FY 89-90 (*$11,181,155,000*) through FY 04-05 (*$27,451,086,000*), this calculation results in the actually recorded taxable sales for the county during this period. Note that during the post-Cold War recession (*FY 90-91-FY 92-93*), the impact of rising prices modified the reduction in constant dollar sales dramatically. In this period, taxable trade without inflation respectively *fell* -6.2%, -2.0% and -4.2%. Taxable trade including inflation was basically flat: falling -1.1%, rising +1.5% and then falling -1.0%. In the recovery and expansion period, taxable trade including inflation grew even faster, rising from 2.6% in FY 93-94 to a powerful 12.8% in FY 2000 before slowing to 3.5% rate during the recession of FY 01-02 and accelerating to 13.8% in FY 04-05.

Total Taxable Sales Forecast, No Inflation. Looking ahead, the 0.00% inflation assumption means San Bernardino County's taxable sales rise simply because of added people with increased constant dollar per capita retail spending. In 2005 dollars, this would take taxable sales to $34,482,581,000 by FY 09-10. The compound rate of increase from FY 04-05 to FY 09-10 would be 4.67% (*Exhibit 1, column 10-11*). From FY 09-10 to FY 39-40, taxable sales would reach 86,060,236,000 in 2005 dollar terms. The compound rate of increase in this 30-year period would be 3.10%. The slower rate would occur because several recession periods fall into this longer time frame and the rate of per capita constant dollar retail sales slows as discussed earlier.

"Point of Delivery" Taxable Sales. SANBAG's tax revenues are not based upon San Bernardino County's total taxable sales as traditionally measured at the "point of sale". Rather, they are based upon ½ percent of the sales at the "point of delivery". In the county's case, taxable volume measured at the "point of delivery" is less than taxable volume at the "point of sale". This occurs because the region's many manufacturing and distribution facilities record sales within the county that are actually delivered elsewhere in California. Such sales show up in the county's "point of sales" data. However, they are not part of the "point of delivery" sales that are used for calculating SANBAG's tax receipts.

Until FY 96-97, "point of sales" taxable volume averaged about 1.5% more than "point of delivery" volume in San Bernardino County (*Exhibit 1, columns 12-13*). However since then, they have fluctuated between 4.5% (*FY 01-02*) and 7.6% (*FY 99-00*). The most recent figure was 4.8% in FY 04-05. The average difference since FY 96-97 has been **5.8%**. That figure is used for forecasting purposes. The modeling assumes the "point of sale" taxable volume grows from 4.8% in FY 04-05, **up 0.25%** per year until it reaches 5.8% and remains there through 2040.

"Point of delivery" taxable sales reached $26,145,049,000 in FY 04-05 (*Exhibit 1, column 14*). Using these assumptions, it will be **$32,481,300,000** in FY 09-10 and climb to **$81,065,500,000** in FY 30-40.

SANBAG Gross Revenue. To calculate SANBAG's estimated gross revenue from Measure I, the taxable sales levels must be multiplied times the ½% tax rate (*Exhibit 1, column 15*). It shows that before the CA State Board of Equalization (*SBOE*) took their fee for processing the tax, SANBAG earned $1,172,017,000 during the 15-years including FY 90-91 through FY 04-05. In the remaining 5-years of Measure I (*FY 05-06 to-FY 09-10*), the estimated gross amount of the tax would be another $755,860,000. For the full 20-years of Measure "I", the total revenue is thus estimated at **$1,927,877,000**. For the 30-years of the extended Measure "I", the gross revenue is estimated at **$8,477,716,000**.

CA Board of Equalization Fees. The amount that CA State Board of Equalization (*SBOE*) charges for processing the tax in the past 14-years has varied from 1.1% of actual receipts to 2.3% (*Exhibit 1, column 16/column 17*). It is assumed that the SBOE fee will be **1.5% of the amount of net revenue** to SANBAG (*Exhibit 1, column 17*).

SANBAG Net Revenue. To estimate net revenue to SANBAG is necessary to take the estimated gross revenue (*Exhibit 1 column 15*) and divide by 1+1.5%. This divides out the amount of the 1.5% fee and yields net revenue to the agency (*Exhibit 1, column 17*). Taking 1.5% of this level yields the SBOE fee (*Exhibit 1, column 15*).

SANBAG earned net revenue of $1,152,839,000 during the 15-years including FY 90-91 through FY 04-05. In the remaining 5-years of Measure I (*FY 05-06 to-FY 09-10*), the estimated net amount of the tax would be another $744,690,000 in constant 2005 dollars. For the full 20-years of Measure "I", the total net revenue is thus estimated at **$1,897,529,000**. For the 30-years of the extended Measure "I", the net revenue is estimated at $8,352,430,000 in constant 2005 purchasing power. Including the last five years of the original measure (*$744,690,000*), the total anticipated constant dollar anticipate net revenue of $9,097,119,000.

Accuracy Summary. The accuracy of this forecast depends upon the accuracy and pattern of the following assumptions:

- Rate of Population Growth is that assumed by SCAG's 2008 RTP forecasting committee.
- Growth of Per Capita Taxable Sales, not including inflation, at 3.58% in normal or good times and 0.00% in two year recessions occurring during the next nine year cycle. After that, it drops to 2.75% for nine years with two recession years. It then drops to 1.75% for seventeen years with four recession years. The recession years lower the compound growth rates in these period, respectively, to 2.75%, 2.15% and 1.37%.
- Rate of CPI inflation growth of 0.00% so the forecast is in 2005 purchasing power.
- Difference between "point of sale" retail sales and "point of delivery" retail sales is 5.8% except a period when it will go from 4.76% in FY 04-05 up to 5.8% in FY 09-10, rising in 0.25% per year increments.
- SBOE fees growth are 1.5% of net revenue to SANBAG.
- A recession occurs in FY 09-10 and FY 10-11and in nine year cycles thereafter.
- There will be nothing like the restructuring and downturn caused by the end of the Cold War in the county's future, as there is no parallel vulnerability to the defense sectors that were downsized in Southern California and San Bernardino County.

Conservative. This analyst believes that these assumptions are quite realistic and tend to the conservative direction. The most important assumption is that of the 3.58% increase in constant dollar per capita taxable retail spending for the next nine years, followed by reductions to an intermediate rate of 2.75% from FY 15 to FY 24, and to 1.75% in FY 25 to FY 40. It requires further comment. This estimate would be high if affected by the following potential issues:

- **The U.S. savings rate is at a negative level for the first time in over 50-years. Could this mean that there will be a serious reduction in spending in the future, causing retail sales to be abnormally low in San Bernardino County?**

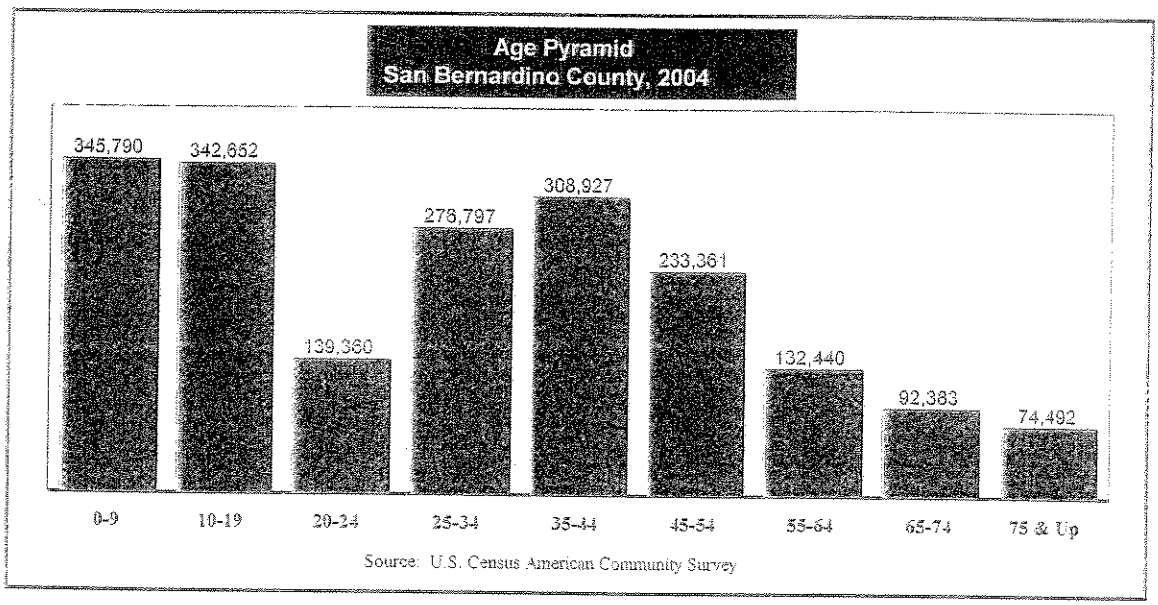
  There may be some truth in this worry, however, this is a U.S. not a local issue. In addition, low savings rates have always been a U.S. phenomenon, worse at some times than others. The particularly low rate right now is because rising real estate values have caused people to treat real estate as an investment. Rather than sell this asset, they have borrowed part of their increased wealth and spent it. This show up as decreasing savings. As long as property values have a "soft" landing, this phenomenon will not be a problem. Even if it is, at worst, it may cause a short term national recession. However, that would cause no more long term damage to spending behavior than any similar such difficulty in the recent past.

  Localizing this phenomenon, a soft-landing scenario appears likely for the Inland Empire's housing market since the region's real estate prices have seen a run-up fundamentally due to a Southern California housing shortage. Those who will be hurt in the next couple of years will be the small minority of families that over-extended on mortgages in 2005. Prior to that, there was a sufficient appreciation in property values to protect the borrowers. It thus appears unlikely that either the national

negative savings rate or a local real estate crash will cause per capita constant dollar retail spending to fall below the 3.58% assumption made in the modeling.

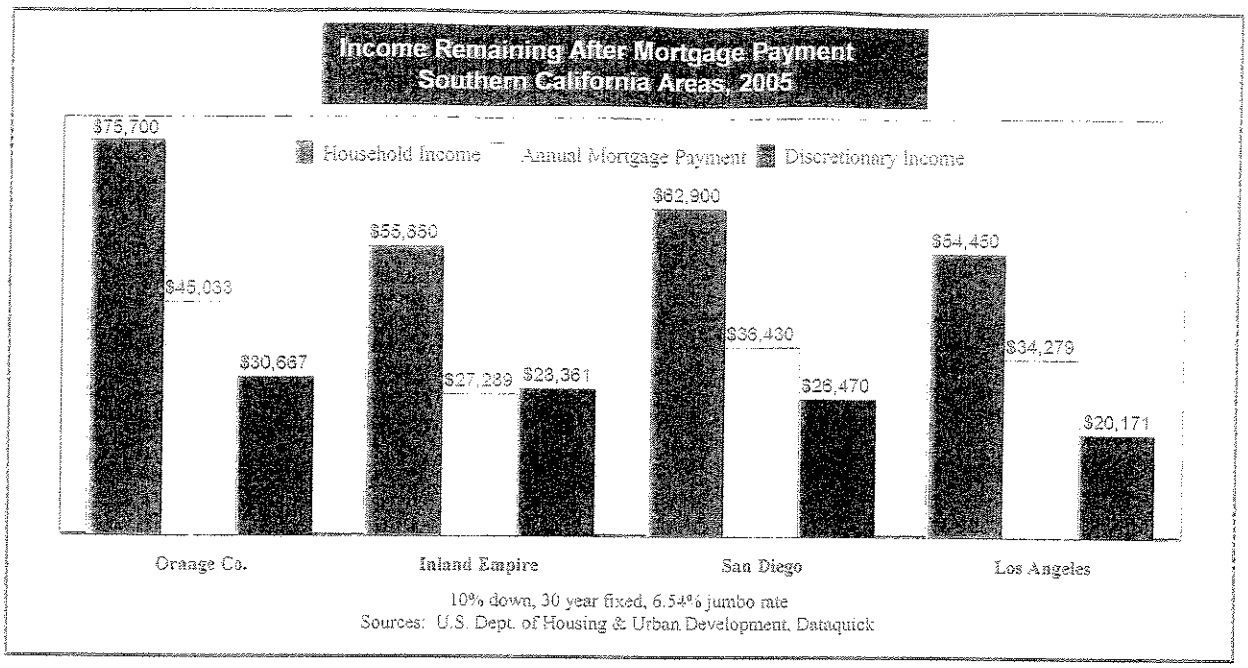
- There is a potential concern in the age pyramid that has the oldest baby boomers (*born in 1946*) beginning to retire in 2011 at age 65. Could this lead to declining household incomes and constant dollar per capita spending in the 29-years from then until 2040 as retirees become a disproportionately larger segment of the population?

  Again, this is a national question. For San Bernardino County, there are several important nuances. The first is the fact that the county is not one in which baby boomers are the dominant age group. In 2004, this group was aged 40-59. Note that they were not part of the dominant age groups in the region. This is the case because the migration of families to the county is driven by housing and whether families are buying entry-level of high-end homes, they tend to be younger and have children.



Thus, there were 827,802 people under 25 in the county in 2004 and just 674,728 from age 35 to 64, only some of whom were 40-59 year old baby boomers.

Meanwhile, though the number of retirees will jump and their incomes will go down, this does not necessarily translate into a significant decline in their retail spending. This is the case because this class of people has both retirement income as well as the largest amount of saved assets of any group in the population. In addition, the Inland Empire's property values will work to the advantage of local people who retire and the retirees who will move here. Thus, Orange County's (*$75,700*) median income is over $20,000 higher than the Inland Empire (*$55,600*), but deducting one year's mortgage payments on the median home in the two areas, Orange County's spendable income for non-mortgage related items is only $2,000 higher.



Even at a national level, the fear that national per capita spending will drop discounts the fact that, historically, the U.S. economy has always responded to periods of labor shortage with powerful productivity gains. This would likely be the case in a period with large numbers of retirees supported by a smaller base of working individuals.

Slowing Per Capita Retail Growth. As stated, in FY 15, it is assumed that the aggressive phase of San Bernardino County's economic maturity will start to wane. An intermediate rate of growth of constant dollar per capita retail sales is thus assumed at 2.75%. This is consistent with the idea that the forces making the county's growth so rapid will be playing out and it will begin to approach the behavior of a mature economy such as today's Orange County. With recessions, this rate results in 2.15% compound growth in this period. Orange County's Measure M Forecasts is at 1.53% for this time frame. By FY 24, it is assume that full maturity will have occurred. The economy will thus act very much like Orange County, except without its coastal wealth. For that reason the 1.75% rate was chosen. With recessions, this yields a compound rate of 1.34% for the 17-years through to FY 40. This compares to 1.56% in Orange County's modeling of Measure M during this period.

Underestimating? The assumption of 3.58% constant dollar per capita spending for nine years, followed by reductions to 2.75% and 1.75% would be underestimates of the long term trend if several factors come into play:

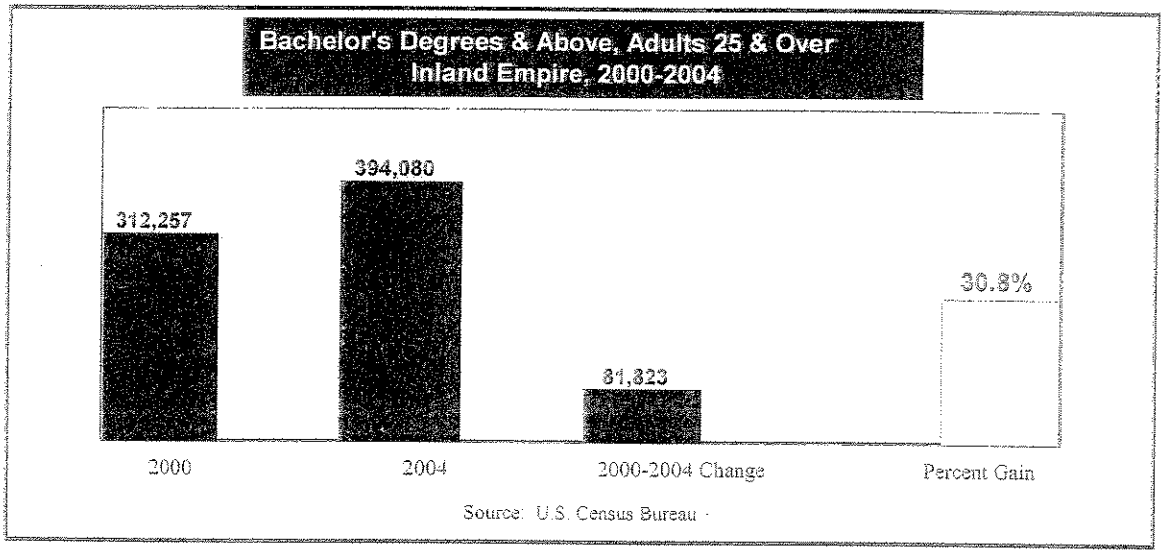
- **Since 2000, there has been a shift in the migration pattern into the Inland Empire with increasing numbers of well-educated people buying high-end homes in the area. They are doing so because this level of housing is beyond their incomes in the coastal counties. Will these people raise the constant dollar per capita spending in the region?**

  There is every reason to suspect that the answer to this question will be "yes". From 2000-2004, the growing base of upscale homes in the Inland Empire has caused the number of people 25 and over with bachelor's degrees and above to grow by 30.8%

or 81,828. Higher educations, high incomes and greater retail spending are, of course, closely correlated.

- **Since the extraordinary success of Victoria Gardens, high-end retailers are looking for potential sites throughout the Inland Empire. Will these outlets raise the constant dollar per capita spending in the region beyond its historical experience?**

  With the incomes of many residents of the Inland Empire much higher than those historically in the area, upscale retailers are now flocking to the area. They will undoubtedly increase constant dollar per capita retail spending in the region by eliminating the outflow of this type of spending to areas like South Coast Plaza in Orange County and Old Town Pasadena in Los Angeles County.



- **Meanwhile, the new residents are bringing their skills with them. How are they affecting the local economy's long term prospects?**

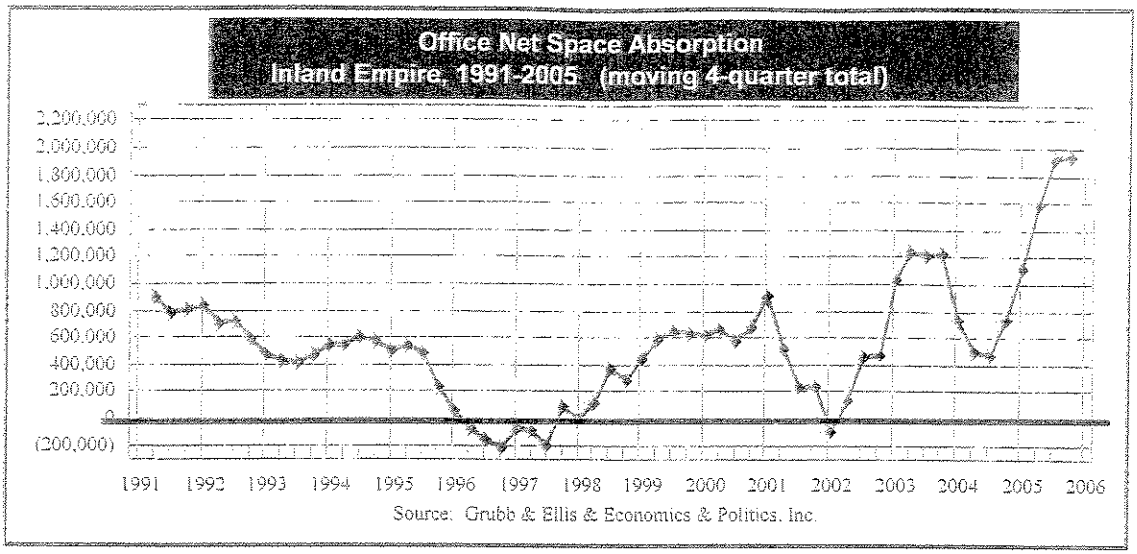
  Historically, once an area begins to acquire a better educated workforce, it becomes competitive for firms and operations that have heretofore not considered locating in it. That is now beginning to happen to the Inland Empire. In 2005, the area saw a record number of firms in the professions, management consulting and the sciences expand in the region.

  Another sign that this is occurring has been the recent take-off in the office market. This form of real estate had been dormant for over a decade. However, it is now at a record level of net space absorption, rents are now at levels found in adjacent coastal county markets and the 7.0% vacancy level is the lowest in the suburban U.S.

  When an economy begins to shift towards white collar jobs this generally means higher average pay will follow since they generally pay better than blue collar jobs, even for non-professional positions.

Most likely, these forces would be most likely to affect the 3.58% figure for the next nine years than the periods afterwards. However, the impact of higher figures in the earlier years has a

greater affect on the total growth of the Measure I revenue stream because it raises the base upon which later growth is calculated.



On balance, the forces that would tend to cause San Bernardino County's constant dollar per capita retail spending to be higher in the future appear to be much stronger than those that might move it in the opposite direction. For this reason, this analyst feels the 3.58% forecasting assumption for the next nine years, with the 0.00% growth in a nine year cycle of recession years is likely an underestimate. The later cycles appear at this time to likely be within the bounds of reason with growth falling to 2.75% and then 1.75%.

How do the forecasts for San Bernardino County compare to Orange County? Below it is assumed that Orange County's per capita constant dollar retail sales grow at 1.5% from FY 05 through FY 11. That is the rate assumed by analysts forecasting that economy's behavior over the next several years. Given that assumption, the following is the year by year comparison of constant dollar per capita retail sales for San Bernardino and Orange Counties. Note that in each case, Orange County's figures remains above those of San Bernardino County.

Fiscal Year	San Bernardino	Orange Co.	Fiscal Year	San Bernardino	Orange Co.
2005-06	$14,609	$17,359	2023-24	$22,200	$22,805
2006-07	$15,132	$17,617	2024-25	$22,600	$23,204
2007-08	$15,673	$17,886	2025-26	$23,000	$23,598
2008-09	$16,233	$18,156	2026-27	$23,400	$24,019
2009-10	$16,233	$18,428	2027-28	$23,400	$24,420
2010-11	$16,200	$18,705	2028-29	$23,400	$24,833
2011-12	$16,800	$18,989	2029-30	$23,800	$25,255
2012-13	$17,400	$19,272	2030-31	$24,217	$25,676
2013-14	$18,000	$19,566	2031-32	$24,640	$26,098
2014-15	$18,500	$19,861	2032-33	$25,071	$26,568
2015-16	$19,000	$20,147	2033-34	$25,510	$27,040
2016-17	$19,500	$20,459	2034-35	$25,957	$27,517
2017-18	$20,000	$20,786	2035-36	$26,411	$27,715
2018-19	$20,000	$21,107	2036-37	$26,411	$28,093
2019-20	$20,000	$21,425	2037-38	$26,411	$28,459
2020-21	$20,800	$21,738	2038-39	$26,873	$28,820
2021-22	$21,200	$22,089	2039-40	$27,343	$29,180
2022-23	$21,800	$22,439			

What will be the dollars generated by the current Measure "I: from 1989 to its completion in 2010? The total generated in 1989 dollars is:

Fiscal Year	Measure "I" Revenue (000)	CPI 1989-90=100	Measure "I" Revenue 1989-90=100
89-90	$4,126	1.000	$4,126
90-91	$54,780	1.054	$51,966
91-92	53,784	1.092	$49,258
92-93	54,746	1.123	$48,554
93-94	54,842	1.147	$47,796
94-95	57,961	1.165	$49,742
95-96	62,037	1.181	$52,536
96-97	64,847	1.204	$53,858
97-98	69,420	1.221	$56,851
98-99	73,244	1.243	$58,943
99-00	81,436	1.277	$63,755
00-01	89,987	1.325	$67,919
01-02	94,458	1.363	$69,323
02-03	102,151	1.403	$72,815
03-04	110,351	1.436	$76,857
04-05	128,793	1.494	$86,196
FY 91 TO FY 05	$1,152,839		$910,496
05-06	135,398	1.494	90,617
06-07	142,340	1.494	95,263
07-08	149,637	1.494	100,146
08-09	157,307	1.494	105,280
09-10	160,006	1.494	107,086
FY 05 to FY 10	$744,690		$498,391
FY 1990-2010	$1,897,529		$1,408,887

It was forecasted in FY 1989-90 that Measure "I" would bring in $1.617 billion dollars in total revenue over its lifetime. In fact, the measure will bring in about $1.409 billion in constant dollar 1989-90 terms. This reduction occurred despite the aggressive behavior of retail sales in recent years. The reason for the lower figure was the very slow activity during the post-Cold War depression in Southern California. This points out the impact on the forecast of lower than expected activity in the early years.

San Bernardino Associated Governments
Plans and Programs Policy Committee

2010-2040 Measure I
Strategic Plan
Cost Estimate Update

July 19, 2006

2010-2040 Measure I Strategic Plan

Cost Estimate Update Basis and Assumptions

June 8, 2006 (Updated June 14, 2006)

Since the passage of the 2010-2040 Measure I Extension in November, 2004, the highway industry has experienced staggering cost increases. With few exceptions, every material used by the highway construction industry has experienced dramatic price increases and, in many cases, reduced availability. To compound the material price and availability issues, fuel price increases have (and continue to) also negatively affected the cost of nearly every construction item. Cost estimates contained in the 2010-2040 Measure I Expenditure Plan were developed in 2001 and 2002 using cost data that was a year or two years old at the time. To evaluate the effects of the substantial changes, the costs estimates in the San Bernardino Associated Governments 2010-2040 Measure I Expenditure Plan have been updated. The intent of this update is to identify changes to the Measure I Expenditure Plan cost estimates, determine the impacts of recent construction price increases, and establish a new cost baseline for the Measure I Expenditure Plan. As mentioned, the price increases have been dramatic and in turn have caused a substantial increase to the Measure I Expenditure Plan. For example, the total cost of the San Bernardino Valley Freeway program has doubled from that of the original estimates prepared for the Measure I Expenditure Plan.

The updated cost estimates contained within this attachment are generally based on conservative assumptions. Conservative, within this context, simply means that the scope of improvements assumed herein are to *full Caltrans standard* and include all of the needed improvements necessary to meet those standards. Many times design exceptions (i.e., exceptions from the standard design criteria) are granted which may help reduce project scope and costs. Other times, however, it is assumed that a design exception will be obtained only to later find out that the exception will not be granted. Typically this results in increased costs since the improvement or effect of the improvement was not anticipated. Whether an exception is actually granted is important, and for the purposes of these estimates, we have assumed that improvements will be to full standard with few exceptions. It must be noted that this assumption is only for our cost estimate basis and it should not be taken to mean that staff will not make every effort develop a reasonable scope of work for every project and vigorously pursue design exceptions as necessary.

The updated cost estimates are based on an assumed project scope of work *and* on a set of cost factors that were established for this purpose. The assumed scope of work for each project is provided in various levels of detail throughout this document. As for the cost factors, historical data was analyzed and incorporated into various cost factors that account for the major expenses on highway projects. The updated cost estimates are supported by specific factors and assumptions that are outlined within each individual estimate. Highway projects are large undertakings that will be (or have been) under development for a considerable length of time. It has been SANBAG's experience that as time passes additional items of work will be added to these projects which will increase their size, complexity, and costs. We have attempted to account for these items using that past experience and other available information. For instance, where complicated freeway-to-freeway connections occur we have included a lump sum cost factor to account for the numerous adjustments that will be required. Other factors have also been developed which are described elsewhere in this document.

A brief description of the basic assumptions that apply to nearly every project is listed below. There are some exceptions to these assumptions and those are noted within the specific project descriptions. These basic assumptions are important because they provide the foundation from which we have developed the estimates. The basic assumptions include four items:

First, full shoulder widths have been assumed for both the median and outside shoulders. In some cases the existing freeway median is not wide enough to accommodate a new lane *and* full median shoulder. In these cases we have assumed outside widening will be included and estimated the project costs accordingly. Caltrans' standard for concrete shoulders was enacted several years ago and we have not experienced (nor do we anticipate) any relief from the standard given the ultimate nature of these projects.

Second, auxiliary lanes are becoming increasingly accepted as an effective and efficient operational improvement. Given the conceptual level of these estimates, it is difficult to estimate the number or length of auxiliary lanes that will be required. Nevertheless, we have attempted to include a length and cost for auxiliary lanes as appropriate to each project.

Third, over the past several years concrete has become the primary material for paving freeway travel lanes and shoulders. Concrete reduces the maintenance requirements and worker exposure

on freeways, but it also is more expensive than asphaltic concrete (at least initially). We have assumed that all of the freeway projects will be paved with concrete unless otherwise noted.

Lastly, we have separated the costs associated with 'interchange' projects and 'mainline freeway' projects so that costs are not counted twice. In many instances existing bridges span an existing freeway and must be replaced to accommodate the mainline widening. When a known interchange project does exist, those bridge replacement costs are included in the interchange project estimate and not the mainline estimate.

In addition to the basic assumptions, the general scope of improvement as assumed for each project is listed below. This list provides an overview as to the number of lanes assumed for each project, how the widening has been estimated – e.g., inside widening vs. outside, etc, and other important assumptions. Specific project details are located within each individual estimate and the associated backup materials.

San Bernardino Valley Freeway Project Estimates:

I-10 Widening Project:

The scope of this project estimate includes one HOV lane and shoulder in each direction and an auxiliary lane for a portion of the project. The existing I-10 median is not wide enough to accommodate a full HOV lane, buffer, and shoulder in all areas, so some outside widening will be necessary. This, together with the addition of some auxiliary lanes, means that the outside shoulder will also have to be rebuilt in areas of the project.

I-15 Widening (Riverside County line to I-215)

The scope of this project estimate includes the construction of one HOV lane and shoulder in each direction. On the stretch of I-15 between I-215 and SR-210, the median is generally wide enough to accommodate the new HOV lane and shoulder. South of SR-210, the I-15 median is too narrow to accommodate all of the widening, so some outside widening will be necessary. In addition, an auxiliary lane is anticipated through a portion of this reach.

I-215 Bi-County (Riverside County line to Orange Show Road)

The scope of this project estimate includes the reconstruction of existing I-215 plus the addition of one HOV and one mixed flow lane in each direction. The reconstruction of I-215 (i.e, the rebuilding of the

entire freeway) is necessary due to the high number of non-standard features that exist on the current freeway. All of the project's interchanges will be reconfigured to meet current standards. Also, although the existing pavement within this reach is asphaltic concrete, we believe it is prudent to plan for concrete pavement given Caltrans' direction in recent years.

Right of way costs are difficult to estimate, but the right of way requirements will be extensive due to the reconfiguration of all of the interchanges. Commercial and light industrial properties are located along the freeway and near many interchanges which will increase the costs of the right of way acquisition. Also, frontage roads that currently parallel the freeway will be relocated which add further to the right of way and overall project complexity issues.

I-215 Widening (SR-210 to I-15)

The scope of this project includes the construction of one lane (HOV or mixed flow) and shoulder in each direction. The existing median does not appear to be wide enough to accommodate the full widening and some outside widening will be necessary along a portion of the project. Near the northern end of the project a moderate amount of right of way will be required to accommodate the relocation of an adjacent frontage road. Also, there are several drainage features have been included in the estimate.

Asphaltic concrete (AC) pavement has been assumed for this project since the existing pavement is AC. Also, portions of the widening will be close to the existing right of way and we have assumed that these portions will fit within the existing right of way. This is not unrealistically optimistic but, it is, nevertheless, worth noting.

SR-210 Widening (I-215 to I-10) – Alternative 1

The scope of this project includes the construction of one lane and median shoulder in each direction in those areas where only two travel lanes currently exist. The entire reach of SR-210 from I-215 to I-10 is approximately ten miles. Of the ten miles, approximately one-half currently has two lanes in each direction and is included in the estimate. Upon completion of the assumed project scope, three continuous mixed flow lanes will stretch from I-215 and I-10. No HOV lanes will exist within the project limits. The project does include a full concrete center barrier over the entire ten mile stretch and soundwalls within the residential portions of the ten mile limit.

SR-210 Widening (I-215 to I-10) – Alternative 2

The scope of this project includes the construction of one HOV lane and median shoulder in each direction from approximately 27th Street (west of I-215) where the existing HOV lane ends to I-10, approximately 11 ½ miles. In addition, one mixed flow lane in each direction will be added where only two travel lanes currently exist, approximately five miles (see Alternative 1). It is anticipated that some outside widening will be necessary within the portion of the project limits where both HOV and mixed flow lanes will be added. Upon completion of the assumed project scope, one HOV and three continuous mixed flow lanes will stretch from I-215 and I-10. The project includes a full concrete center barrier from I-215 to I-10 (approximately 10 miles) and soundwalls within residential portions of the project limits.

Cajon Pass Estimates:

I-15 & I-215 Interchange (Devore Interchange)

The scope of this project estimate includes the reconstruction of the I-15/I-215 interchange as generally depicted in the I-15 Comprehensive Study dated December 20, 2005. The roadway concept assumed for this estimate is to carry two new HOV lanes through the interchange (one in each direction). Doing so will require the reconstruction of most of the connectors and a portion of the I-15 and I-215 mainlines. Our estimate basis reflects four through lanes on I-15 both northbound and southbound, the realignment of southbound I-15/I-215 connector to the west of the interchange, realignment of northbound I-215/I-15, and establishment of truck bypass lanes.

I-15 Cajon Pass Widening

The scope of this estimate includes the construction of one HOV lane and shoulder from the Devore Interchange to US 395. Terrain along the project is steep and fairly rugged and could require a large amount of earthwork. Earthwork was simply estimated as a lump sum volume (five million cubic yards). A new truck climbing lane was not assumed as part of this estimate.

Mountain Desert Area Estimates:

Victor Valley Subarea Projects

The following estimates are for information only and are intended to provide a range of potential costs that may be expected if I-15 through the Victor Valley is widened.

I-15 (US 395 to south of Bear Valley Road – Segment 2)

The scope of this estimate includes the construction of one HOV lane and shoulder in each direction. The existing median does not appear to be wide enough to accommodate the full lane and shoulder width so some outside widening may necessary. It is assumed that the improvements will fit within the existing right of way and no major modifications to frontage roads will be necessary.

I-15 (Bear Valley Road to Route 18 – Segment 1)

The scope of this estimate includes the construction of one HOV lane and shoulder in each direction. This project is complicated by the limited right of way and narrower median. This combination leads to extensive right of way needs within a developed area and the reconstruction of frontage roads and local improvements along the freeway.

Interchange Projects (Ranchero Road, Eucalyptus St, and Nisqualli Rd/La Mesa Rd)

The estimated costs presented are the most current for the projects as reported by the consultants working on the project development. The costs reflect an average cost for the current range of alternatives and have also been adjusted to include administrative costs.

Detailed Estimate Explanation

The cost estimates are generally based upon per mile cost factors for various items of work. Per-mile factors are then multiplied by the overall project length and in some cases also by a percentage factor meant to account for the estimated length of that item. The overall project length is simply the distance of the project in one direction. If a project consists of constructing two HOV lanes, then the project length is multiplied by the number of lanes (two, for this example). In some cases we have assumed a partial lane (e.g., 0.5) which accounts for roadway widening on a portion of the overall length. Auxiliary lanes are a good example of an item that would not necessarily extend for an entire project length. Once the lane miles are known then a unit cost factor for earthwork and paving is multiplied by the lane miles to determine a cost.

Other items such as retaining walls or soundwalls have been estimated using a percentage of the project distance. A factor of 0.3 for retaining walls would mean that we estimated a retaining wall along 30 percent of one side of the project, or a wall along each side of 15 percent of both sides of the project.

Lengths and factors are typically based upon the project distance listed in the upper right corner of the detailed estimate. Those lengths are then multiplied by a unit rate for retaining wall construction.

One of the most difficult items to estimate is right of way costs. The extent and cost of right of way is many times underestimated. Our right of way estimates are based on the number of acres per mile that will be required for the project. For example, a ten mile widening project might require a relatively small amount of right of way. If so, a factor of 0.25 might be used which would represent 0.25 acres/mile of right of way, or 2.5 acres (roughly 100,000 sf) for the entire project. The difficult determination is estimating the unit cost of land. We have assumed three categories of land: 1) residential; 2) commercial; and 3) undeveloped land. Commercial has been assumed to be most expensive and undeveloped land the least expensive.

The factors used in developing these cost estimates are derived from historical SANBAG cost data as well as other industry cost data. Our most recent data includes that of the I-10 Median Lane Addition project which bid in September, 2005 and represents work very similar to most of the projects contained in the Expenditure Plan - i.e., widening projects on operating freeways. Other historical SANBAG project data have been included, the I-10 project is simply one example. We have also researched other sources and incorporated those data as applicable. We believe that our factors and estimates provide a good representation of the expected costs and that the estimates capture a realistic view of the expected costs.

SAMPLE DETAILED ESTIMATE

SR-30/210 Widening (Alternative 2) from I-215 to I-10

Total Miles	**11.5**
Outside Lane constructed over existing shoulder	**0.86**
Outside Lane	**0**
Outside Shoulder	**0.7**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Construct one inside lane and shoulder each direction where needed - about 5 miles.
Construct one HOV lane in each direction from 27th Street to I-10 - about 11-1/2 miles

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$86,985,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.15		
	Residential (SF)			$3,456,486
	Commercial (SF)			$3,381,345
	Undeveloped land (SF)			$473,388
	TOTAL Right of Way Cost			**$7,312,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	98%	$1,350,000	$15,214,500
	High Density	2%	$2,700,000	$621,000
	TOTAL Utilities Cost			**$15,836,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	9.89	$50,000	$494,500
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	8.05	$1,495,000	$12,034,750
	Pavement - Lanes	9.89	$573,000	$5,666,970
	Pavement - Shoulder	8.05	$477,000	$3,839,850
	Subtotal - Outside Paving and Earthwork			$22,036,070
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	46	$58,000	$2,668,000
	Pavement - Lanes	23	$573,000	$13,179,000
	Pavement - Shoulder	23	$477,000	$10,971,000
	Subtotal - Inside Paving			$26,818,000
4c	*Barrier*			
	Center barrier per mile	10	$500,000	$5,000,000
	Other barrier per mile	10	$160,000	$1,600,000
	Subtotal - Barrier			$6,600,000
	Adjust mileage to account for entire 10 mile reach			

SAMPLE DETAILED ESTIMATE

4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			
	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	36	$100,000	$3,600,000
	Subtotal Misc. Paving			$3,600,000
	Subtotal Earthwork, Paving, and Barrier			$59,054,070
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$2,952,704
	Front End Work	15%		$8,858,111
	Drainage	8%		$4,724,326
	Electrical	5%		$2,952,704
	Miscellaneous	10%		$5,905,407
	Subtotal Other Roadway Items			$25,393,250
	TOTAL Roadway Construction Cost			**$84,448,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	15%	$1,900,000	$3,277,500
	Soundwall per mile	75%	$1,300,000	$11,212,500
	TOTAL Wall Construction Cost			**$14,490,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	372,125	$232	$86,333,000
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$86,333,000**
	SUBTOTAL CONSTRUCTION COST			**$185,271,000**
8	***Mobilization***	10%		$18,528,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$27,791,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	2	$1,000,000	$2,000,000
	Major Freeway/Freeway I/C	2	$15,000,000	$30,000,000
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	0	$500,000	$0
	Subtotal Additional Features			$32,000,000
11	**TOTAL CONSTRUCTION COST**			**$263,590,000**
12	**TOTAL PROJECT COST**			$373,723,000
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

Freeway Cost Estimate Unit Rates

Note: Rates subject to adjustment within indivdual estimates to account for specific project conditions

Definitions:

HOV Lane - 12' inside lane addition (4' buffer is separate)
Inside Lane Addition - 12' inside lane addition
Inside Shoulder - 10' inside shoulder (no buffer is included)
Aux Lane - 12' outside lane (outside shoulder needed and is separate item)
1st Outside Lane Addition - 12' outside lane addition (outside shoulder is likely required but is separate item)
*Outside Lane Addition Beyond 1st - 12' lane that is beyond the existing shoulder limit and therefore requires full grading (*see note below)*
Outside Shoulder - 10' shoulder (assumes full slope grading and prism since it is assumed to be beyond ex. shoulder).
Misc. Paving - Non-Freeway road or street construction (e.g., frontage rd, reconstruction of local roads, etc)
Misc. Paving - Ramp Modification - Accounts for work necessary to modify ramps near gore points to accommodate outside mainline widening

**Note: In most cases an outside shoulder exists which reduces the amount of rough grading needed for new construction.*

Earthwork	Units	Rate
Inside Travel Lane	Mile	$58,000
Inside Shoulder	Mile	$49,000
Outside Lane (or Shoulder) - widening adjacent to existing lane or shoulder [1]	Mile	$50,000
Outside Shoulder (or lane) - beyond existing shoulder	Mile	$435,000
Out Slope Grading Prism [2]	Mile	$545,000

(1) Note: Calculation of grading quantity for lane or shoulder construction directly adjacent to existing edge of travel way is based on assumption t a shoulder currently exists and the cooresponding grading for that portion is minimal. Assumes $18/cy for earthwork.
(2) Assumes 4:1 slope, average height of 8 feet (4 feet W/O 215 and 12 feet E/O 215), and $18/cy for earthwork

Mainline Paving

PCC Pavement	Units	Rate
Travel Lane - 12' PCC	Mile	$573,000
Shoulder - 10' PCC	Mile	$477,000

Note: Paving cost based upon assumed structural section of 11" PCC, 1" AC bond breaker, and 6" LCB and long life pavement joints
Assumed Cost: PCC cost: $200/CY; LCB: $105/CY; AC: $77/CY

Asphaltic Concrete Pavement	Units	Rate
Travel Lane - 12' AC	Mile	$357,000
Shoulder - 10' AC	Mile	$297,000

Miscellaneous Paving	Units	Rate
Ramp Modification	per ramp loc.	$100,000

Barriers	Units	Rate
Center Barrier	Mile	$500,000
Other Barrier	Mile	$160,000

Note: Other Barrier category accounts for items such as MBGR, outside shoulder barrier, and other misc. locations

Other Construction Items:

Removals		5%
	Includes items such as demolition, relocations, clear & grub	
Front End and General Project Items		15%
	Includes items such as develop water supply, SWPPP, schedule, constr signs, etc.	
Drainage	(may vary between 5-15%)	15%
	Includes items such as onsite and offsite systems, inlets, modifications to ex. drainage systems	
Electrical		5%
	Includes items such as signals, lighting, temp. signals, controllers	
Miscellaneous		10%
	Includes items such as, perm. striping, signs (OH and posts), erosion control, fencing	

Other Construction Factors' items are applied to the costs of Roadway Paving, Earthwork, and Barrier costs.

Retaining Walls

Wall Height	Units	Rate
4 feet	Mile	$1,380,000
6 feet	Mile	$1,800,000
10 feet	Mile	$3,000,000
14 feet	Mile	$4,400,000
18 feet	Mile	$6,200,000
22 feet	Mile	$8,700,000

Note: Wall height of 10' is typ. assumed.

Sound Walls	Units	Rate
12 feet high	Mile	$1,300,000

Note: Cost is based on masonary wall founded on trench footing.

Structures	Units	Rate
Overcrossing (O/C) Replacement	Sq Ft	$167
Miscellaneous Associated Roadway Items	Sq Ft	$83
Total OC Replacement		$250

	Units	Rate
Undercrossing (U/C) Widening	Sq Ft	$232
Miscellaneous Associated Roadway Items	Sq Ft	$0
Total Widening		$348

	Units	Rate
Overcrossing (O/C) Widening	Sq Ft	$232
Miscellaneous Associated Roadway Items	Sq Ft	$116
Total UC Replacement		$348

Note: "Misc. Associated Roadway Items" includes roadway reconstruction that is necessary to match new structure and includes items such as local street paving, grading, signal reconstruction, ramp termini reconstruction, etc. (Est. to be 50% of bridge)

2010-2040 Measure I
Strategic Plan

San Bernardino Valley
Cost Estimates

July 19, 2006

2010-2040 Measure I Strategic Plan

San Bernardino Valley

Project Description	Updated Cost (Present)	Expenditure Plan	Delta (Expenditure Plan)
Freeway:			
I-10 Widening Project from I-15 to Riverside County Line	***$1,227,642,000***	***$610,000,000***	***-$617,642,000***
I-15 Widening Project from Riverside County Line to I-215	***$479,798,000***	***$180,000,000***	***-$299,798,000***
I-215 Widening Project from Riverside County Line to I-10	***$683,740,000***	***$300,000,000***	***-$383,740,000***
I-215 Widening Project from SR-210 to I-15	***$169,994,000***	***$120,000,000***	***-$49,994,000***
SR-210 Widening Project (Alt. 1) from I-215 to I-10	***$138,033,000***	***$140,000,000***	***$1,967,000***
SR-210 Widening Project (Alt. 2) from I-215 to I-10	***$373,723,000***	--	--
Carpool Connectors Various Locations (Study Only)	***$90,000,000***	***$90,000,000***	***$0***
Total Freeway Projects*	***$2,789,207,000***	***$1,440,000,000***	***-$1,349,207,000***
**SR-210 Widening Project (Alt 2) not included in Freeway Project "Total"*			
Interchanges:			
Total Interchange Projects (Includes 38 Projects)	***$942,000,000***	***$862,000,000***	***-$80,000,000***
Major Street:			
Total Major Street Projects	***$1,567,000,000***	***$1,340,000,000***	***-$227,000,000***
Total San Bernardino Valley Projects	***$5,298,207,000***	$3,642,000,000	-$1,656,207,000

I-10 HOV Widening Project from I-15 to Riverside County Line

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$248,780,000**
Right of Way		**$147,561,000**
Utility Relocations		**$77,423,000**
Construction Items		
Roadway Construction	$392,416,000	
Wall Construction	$39,990,000	
Structures Construction	$116,294,500	
Mobilization	$54,871,000	
Construction Contingency	$82,306,000	
Additional Construction Items	$68,000,000	
Total Construction Cost		**$753,878,000**
Total Project Cost		**$1,227,642,000**

I-10 Widening
from I-15 to Riverside County Line

Total Miles	**31**
Outside Lane (constructed over existing shoulder)	**2**
Outside Lane	**0.5**
Outside Shoulder	**2**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$248,780,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.5		
	Residential (SF)			$23,293,710
	Commercial (SF)			$121,532,400
	Undeveloped land (SF)			$2,734,479
	TOTAL Right of Way Cost			**$147,561,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	15%	$1,350,000	$6,277,500
	High Density	85%	$2,700,000	$71,145,000
	TOTAL Utilities Cost			**$77,423,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	62	$50,000	$3,100,000
	Earthwork - Other lanes	15.5	$465,000	$7,207,500
	Earthwork - Shoulder	62	$980,000	$60,760,000
	Pavement - Lanes	77.5	$573,000	$44,407,500
	Pavement - Shoulder	62	$477,000	$29,574,000
	Subtotal - Outside Paving and Earthwork			$145,049,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	124	$58,000	$7,192,000
	Pavement - Lanes	62	$573,000	$35,526,000
	Pavement - Shoulder	62	$477,000	$29,574,000
	Subtotal - Inside Paving			$72,292,000
4c	*Barrier*			
	Center barrier per mile	31	$500,000	$15,500,000
	Other barrier per mile	31	$160,000	$4,960,000
	Subtotal - Barrier			$20,460,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.35	$535,000	$11,609,500
	Ramp Mod. (ea. ramp)	122	$100,000	$12,200,000
	Subtotal Misc. Paving			$23,809,500
	Subtotal Earthwork, Paving, and Barrier			$261,610,500
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$13,080,525
	Front End Work	15%		$39,241,575
	Drainage	15%		$39,241,575
	Electrical	5%		$13,080,525
	Miscellaneous	10%		$26,161,050
	Subtotal Other Roadway Items			$130,805,250
	TOTAL Roadway Construction Cost			**$392,416,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	30%	$3,000,000	$27,900,000
	Soundwall per mile	30%	$1,300,000	$12,090,000
	TOTAL Wall Construction Cost			**$39,990,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	118,050	$250	$29,512,500
	U/C Widening (sf)	244,750	$232	$56,782,000
	R/R O/C Replacement (ea.)	1	$30,000,000	$30,000,000
7	**TOTAL Structures Cost**			**$116,294,500**
	SUBTOTAL CONSTRUCTION COST			**$548,701,000**
8	***Mobilization***	10%		$54,871,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$82,306,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	3	$500,000	$1,500,000
	Major Freeway/Freeway I/C	3	$15,000,000	$45,000,000
	Major Drainage Systems (ea.)	3	$2,000,000	$6,000,000
	Landscape (per mile)	31	$500,000	$15,500,000
	Subtotal Additional Features			$68,000,000
11	**TOTAL CONSTRUCTION COST**			**$753,878,000**
12	**TOTAL PROJECT COST**			**$1,227,642,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	I-10 Widening
PROJECT LIMITS:	I-15 to Riverside County Line (Haven to Riv Co Line)
PROJECT LENGTH (MI):	31
PROJECT SCOPE:	Add 1 HOV in each direction

ROADWAY FACTORS:

OUTSIDE LANE	0	
INSIDE LANE	2	Per the project scope of adding 1 HOV lane in each direction from Haven Avenue to the San Bernardino-Riverside County
AUXILIARY	2	Assume 1 auxiliary lane on each side for entire length of corridor.
OUTSIDE SHOULDER	1	Assume half outside shoulder width of widening required along entire length of project (both sides)
RETAINING WALL	0.6	Retaining Wall estimate based on retaining wall locations shown in the PSR Reports.
SOUND WALL	0.5	Sound wall factor estimated from assuming 15-ft high wall and dividing it by the area assumed in the PSR Report (1) and assuming similar consistency with the 6 miles of freeway covered by PSR report (2).
RAMPS TOTAL	122	Ramp total includes all interchange ramps, all freeway to freeway connector ramps and the ramps associated with the two rest stops. Ramp total also includes the ramps located at County Line Rd interchange that are within San Bernardino County.

BRIDGE FACTORS:

BRIDGE WIDEN FACTOR (SINGLE)	25	Assumes there is approximately 30 feet available in the median and will require about 25 feet of outside widening.
BRIDGE WIDEN FACTOR (MULTI)	50	Assumes 40 feet widening to close gap between structures and about 10 feet of outside widening.
BRIDGE REPLACE LENGTH	250	Assumes 1 HOV, 3 mixed flow, 1 auxiliary, 1 HOV buffer, 2 standard shoulders and a 1.5:1 open abutment.
BRIDGE REPLACE WIDTH	VAR	

RIGHT OF WAY AND UTILITY FACTORS:

RIGHT OF WAY ACRE/MILE	0.5	Estimated using PSR reports.
RESIDENTIAL	5%	Estimated approximately 1.5 miles of potential residential land affected based on 2004 General Plan and aerial photos on SANBAG GIS site.
COMMERCIAL	81%	Estimated approximately 25 miles of potential commercial land affected based on 2004 General Plan and aerial photos on SANBAG GIS site. Commercial category includes commercial, retail, industrial (all non-residential)
UNDEVELOPED LAND	15%	Estimated approximately 4.5 miles of potential bare land affected based on 2004 General Plan and aerial photos on SANBAG GIS site.
HIGH DENSITY UTILITIES	100%	Full project length assumed to be high density due to complexity (Fiber Optic line in Redlands area, and Transmission Tower in median near Etiwanda.) and high density of development west of I-215.
LOW DENSITY UTILITIES	0%	

OTHER FACTORS:

FWY TO FWY INTERCHANGES	3	I-10/I-15, I-10/I-215, I-10/SR 30
MAJOR DRAINAGE FACILITIES	3	
MAJOR WATER CROSSINGS	3	Etiwanda wash, Warm Creek, and Santa Ana River
RAILROAD OVERCROSSINGS	1	Slover Mountain Overpass
RAILROAD UNDERCROSSINGS	3	

GENERAL ASSUMPTIONS AND NOTES:

Assume sufficient right of way in median to accommodate most of widening with the exception of slight outside widening (approximately 5 feet on each side)..

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Railroad directly adjacent to south side of freeway from Haven to Mt. Vernon

Frontage road from Ford to Wabash on north side, Hampton Road to Live Oak both north and south side, and from Live Oak to the County Line on the north side. (substantial right of way requirements likely)

Overcrossings that are included in the Valley Interchange Project list from Expenditure Plan/Nexus Study are not included in the I-10 HOV Project estimate.

(From West to East) Median width from Haven to about 1200 ft before Day Cyn Channel is about 30 ft wide. From that point to the Kaiser Spur OH the median width varies between 65 and 80 ft. From Kaiser OH to about I-215 the median width is about 36 ft, however at each overcrossing interchange (exceptions are Cedar, Pepper, Rancho), the median narrows to about 15 ft this width continues from gore point to gore point. After I-215 to about Orange, the median is about 36 ft. From Orange to close to Yucaipa the median varies between 50-60 ft. After Yucaipa to the end of the project limits, the median is about 30 ft.

Topography gets hilly east of University in Redlands.

REFERENCE DOCUMENTS:

(1) DRAFT Project Study Report/Project Development Support 08-SBd-10-KP 13.20/53.8, 08-804-OC250K, In San Bernardino County on Interstate I-10 from Haven Avenue Overcrossing to Ford Street Undercrossing.

(2) DRAFT Project Study Report/Project Development Support 08-SBd-10-KP 53.8/63.1, 08-Riv-10-KP R0.0/10.8, 08-185-OA330K, In San Bernardino County on Interstate I-10 from Ford Street Undercrossing to San Bernardino/Riverside County Line to SR 60 in Riverside County.

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES: (West to East)

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	TOTAL WIDEN AREA (SQ FT)	NOTES
1	Day Canyon Channel	85	1	2,125	The NB I-15 from EB I-10 ramp merges at this location.
2	Etiwanda Wash (R/L)	50	2	2,500	The (L) bridge (looking East) includes a portion of the Etiwanda WB on-ramp. The wash is at a slight skew for all bridges. Steel bridge and not even between R and L?
3	Etiwanda Wash (S)	50	1	-	The (S) bridge includes a portion of the Etiwanda EB off-ramp. Widening at this location may not be required?
4	Valley Blvd Off ramp (L)	130	1	1,625	Interchange (partial)- 2 ramps
	Valley Blvd Off ramp (R)	225	1	2,813	
5	Etiwanda - San Sevaine Flood Control Channel	185	2	9,250	Separate EB on-ramp structure adjacent to channel crossing structures. Assumed not to require widening.
6	Kaiser Spur Overhead	25	1	625	Railroad
7	Colton Overhead (L)	250	1	3,125	Railroad. I-10 curved in this area. The R/L reference from looking East. Steel bridge
	Colton Overhead (R)	365	1	4,563	
8	La Cadena Dr Undercrossing	65	1	1,625	Interchange (partial) with 2 ramps.
9	9th Street Undercrossing	100	1	2,500	Interchange (partial) with 2 ramps.
10	Pavillion Spur Overhead	235	1	5,875	On a curve and is skewed to the fwy. Both the EB on-ramp and WB off-ramp are part of the overcrossing structure.
11	Warm Creek Undercrossing	410	2	20,500	Water crossing
12	Santa Ana River Undercrossing	860	3	60,200	Water crossing. The "G" structure is the EB I-10 to I-215 Connector. The PSR report shows the I-10/I-215 connector to be widened. Will assume 20 foot widening for this structure. Therefore the total widening is assumed to be 70 feet. The area calculation for this bridge is not automatic and should be adjusted manually.
13	Hunts Lane Undercrossing	150	1	3,750	Includes part of the WB I-10 to I-215 connector ramp.
14	Waterman Ave Undercrossing	165	1	4,125	Interchange with 7 ramps (2 ramps go directly to Hospitality Lane).
15	San Timoteo Creek Undercrossing	205	1	5,125	Average length used (range is from 180-225 feet). Channel is at a skew to the freeway.
16	Gage Canal Undercrossing	105	1	2,625	There is a structure in the PSR that appears to be the San Timoteo UC that is to be removed, but not sure how this will be done. There appears to be a Gage Canal UC per the Thomas Guide.
17	Tippecanoe Ave Undercrossing*	120	1	3,000	Interchange with 4 ramps.
18	Mountain View Av Undercrossing*	160	1	4,000	Interchange with 4 ramps.
19	West Redlands Overhead	365	1	9,125	Railroad and Mission Channel. Skew
20	California Street Undercrossing*	180	1	4,500	Interchange with 4 ramps.
21	Nevada Street Undercrossing	160	1	4,000	
22	Colton Ave-New York Ave Undercrossing	430	1	10,750	This structure over the intersection of Colton Ave and New York Ave. The freeway is at a skew at this location.
	Colton Ave-New York Ave Undercrossing (EB on-ramp)	640	1	12,800	Assume a 20 foot widening for this structure.
23	Texas Ave Undercrossing	185	1	4,625	
24	Eureka Street Undercrossing	165	1	4,125	Interchange (partial)

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

UNDERCROSSINGS (WIDEN) *CONTINUED*					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	TOTAL WIDEN AREA (SQ FT)	NOTES
25	Orange Street Undercrossing	210	1	5,250	Interchange (partial) total of 3 ramps (1 goes directly to Eureka). Gap closure between structures as part of Median Lane Addition Project.
26	Sixth Street Undercrossing	160	1	4,000	Interchange (partial) with 2 ramps. Gap closure between structures as part of Median Lane Addition Project.
27	Church Street Undercrossing	195	1	4,875	Gap closure between structures as part of Median Lane Addition Project.
28	Redlands Overhead	350	1	8,750	Railroad. Gap closure between structures as part of Median Lane Addition Project.
29	University Street Undercrossing*	185	1	4,625	Interchange (partial) with 2 ramps. Gap closure between structures as part of Median Lane Addition Project.
30	Citrus Avenue Undercrossing	275	1	6,875	Gap closure between structures as part of Median Lane Addition Project.
31	Cypress Ave Undercrossing	165	1	4,125	Interchange (partial) with 2 ramps. Gap closure between structures as part of Median Lane Addition Project.
32	Palm Ave Undercrossing	145	1	3,625	Gap closure between structures as part of Median Lane Addition Project.
33	Highland Ave Undercrossing	145	1	3,625	Gap closure between structures as part of Median Lane Addition Project.
34	Ford Street Undercrossing	150	1	3,750	Interchange (partial) with 2 ramps. Gap closure between structures as part of Median Lane Addition Project.
35	Redlands Blvd Undercrossing	215	1	5,375	Skew. Gap closure between structures as part of Median Lane Addition Project.
TOTAL WIDEN		3250	43	244,750	

Assumptions/Notes:

Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Haven Ave Overcrossing	-	-	-	Assumed to accommodate widening. Two structures overcrossing freeway. Interchange with 6 ramps.
2	Milliken Avenue Overcrossing	-	-	-	Assumed to accommodate widening. Interchange with 4 ramps.
3	EB I-10 to NB I15 Connector	-	-	-	Assumed to accommodate widening.
4	NB I-15 to WB I-10 Connector	-	-	-	Assumed to accommodate widening.
5	I-15	-	-	-	Assumed to accommodate widening. Two structures, 1 each for SB and NB.
6	WB I-10 to SB I-15	-	-	-	Assumed to accommodate widening.
7	SB I-15 to EB I-10	-	-	-	Assumed to accommodate widening.
8	Etiwanda Overcrossing	90	120	46,800	Interchange with 6 ramps. Per the Major Street Project list, there is plans to widen the street from 4 to 6 lanes. Estimate replace width to be 6-12 ft lanes, 1 turn lane, and 35 feet additional width to account for sidewalk and barrier for a total width of 115. Also assume a 390 feet replace length to account for loop on off ramps.
9	Cherry Avenue Overcrossing*	-	-	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps
10	Citrus Avenue Overcrossing*	-	-	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps.
11	Sierra Avenue Overcrossing	-	-	-	Interchange with 4 ramps. Assumed to accommodate widening.
12	Cedar Avenue Overcrossing*	-	-	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps.
13	Riverside Avenue Overcrossing*	-	-	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps
14	Pepper Avenue Overcrossing*	40	85	-	Interchange with 4 ramps.. Major Street Projects states that Pepper will be widened from 2 lanes to 4 lanes in each direction. Assume total widen to be 85 feet.
15	Slover Mountain Overpass	35	35	8,750	Railroad
16	Rancho Avenue Overcrossing	75	75	18,750	Interchange with 4 ramps.. Slight skew. There is a railroad portion to the bridge. Assumed that the replacement will not include the railroad portion of the bridge.
17	Mt Vernon Overcrossing*	35	35	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps.. Bridge is curved and skewed and has a loop ramp. assume replace length of 325 feet. Although Major Street Project plans to widen Mt Vernon from La Cadena to I-10 from 4 to 8 lanes, will assume existing width across I-10.
18	EB I-10 to NB I-215	-	-	-	Assumed to accommodate widening.
19	SB I-215 to EB I-10	-	-	-	Assumed to accommodate widening.
20	I-215	-	-	-	Assumed to accommodate widening.
21	WB I-10 to SB I -215	-	-	-	Assumed to accommodate widening.
22	Richardson Street Overcrossing	45	45	11,250	
23	Alabama Street Overcrossing *	80	80	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps.. Major Street Project that states will widen from 2 to 4 lanes, but can't verify at this time that it will include the area over I-10. Will assume for this calculation that existing width will apply to the replacement.
24	EB I-10 to NB SR 30	-	-	-	Assumed to accommodate widening.
25	SB SR 30 to EB I-10	-	-	-	Assumed to accommodate widening.
26	Tennessee St Overcrossing	65	-	-	Assumed to accommodate widening. Interchange with 3 ramps.
27	Wabash Ave Overcrossing *	40	40	-	Assumed to be completed prior to HOV project. Interchange (partial) with 2 ramps.
28	Yucaipa Blvd Overcrossing	85	85	21,250	Interchange with 4 ramps.

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

OVERCROSSINGS (REPLACE) *CONTINUED*					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
29	16th Street Overcrossing	45	45	11,250	
30	Live Oak Canyon Overcrossing*	55	55	-	Assumed to be completed prior to HOV project. Interchange with 4 ramps.
31	Wildwood Creek Overcrossing (Channel)	-	-	-	Appears to be a culvert only (not bridge structure). Creek has very steep side slopes.
TOTAL REPLACE		690	700	118,050	

Assumptions/Notes:

Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.

Assume that Overcrossings will be replaced at same width as existing (unless otherwise known to be widened at a future date).

The interchange projects that are outside the scope of the PSR are assumed to be complete for the project.

* indicates on the interchange project list per the Nexus Study and Expenditure Plan

I-15 Widening Project from Riverside County Line to I-215

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$103,029,000**
Right of Way		**$34,186,000**
Utility Relocations		**$30,375,000**
Construction Items		
Roadway Construction	$112,799,000	
Wall Construction	$23,250,000	
Structures Construction	$82,916,800	
Mobilization	$21,897,000	
Construction Contingency	$32,845,000	
Additional Construction Items	$38,500,000	
Total Construction Cost		**$312,208,000**
Total Project Cost		**$479,798,000**

I-15 Widening
from Riverside County Line to I-215

Total Miles	**15**
Outside Lane (constructed over existing shoulder)	**1**
Outside Lane	**0**
Outside Shoulder	**1**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$103,029,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.3		
	Residential (SF)			$2,254,230
	Commercial (SF)			$30,873,150
	Undeveloped land (SF)			$1,058,508
	TOTAL Right of Way Cost			**$34,186,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	50%	$1,350,000	$10,125,000
	High Density	50%	$2,700,000	$20,250,000
	TOTAL Utilities Cost			**$30,375,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	15	$50,000	$750,000
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	15	$980,000	$14,700,000
	Pavement - Lanes	15	$573,000	$8,595,000
	Pavement - Shoulder	15	$477,000	$7,155,000
	Subtotal - Outside Paving and Earthwork			$31,200,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	60	$58,000	$3,480,000
	Pavement - Lanes	30	$573,000	$17,190,000
	Pavement - Shoulder	30	$477,000	$14,310,000
	Subtotal - Inside Paving			$34,980,000
4c	*Barrier*			
	Center barrier per mile	15	$500,000	$7,500,000
	Other barrier per mile	15	$160,000	$2,400,000
	Subtotal - Barrier			$9,900,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	28	$100,000	$2,800,000
	Subtotal Misc. Paving			$2,800,000
	Subtotal Earthwork, Paving, and Barrier			$78,880,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$3,944,000
	Front End Work	15%		$11,832,000
	Drainage	8%		$6,310,400
	Electrical	5%		$3,944,000
	Miscellaneous	10%		$7,888,000
	Subtotal Other Roadway Items			$33,918,400
	TOTAL Roadway Construction Cost			**$112,799,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	50%	$1,800,000	$13,500,000
	Soundwall per mile	50%	$1,300,000	$9,750,000
	TOTAL Wall Construction Cost			**$23,250,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	357,400	$232	$82,916,800
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$82,916,800**
	SUBTOTAL CONSTRUCTION COST			**$218,966,000**
8	***Mobilization***	10%		$21,897,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$32,845,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	2	$500,000	$1,000,000
	Major Freeway/Freeway I/C	2	$15,000,000	$30,000,000
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	15	$500,000	$7,500,000
	Subtotal Additional Features			$38,500,000
11	**TOTAL CONSTRUCTION COST**			**$312,208,000**
12	TOTAL PROJECT COST			$479,798,000
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	I-15 Widening
PROJECT LIMITS:	Riverside County Line to I-215
PROJECT LENGTH:	15 miles
PROJECT SCOPE:	Add 1 HOV in each direction (per 2004 RTP)

ROADWAY FACTORS:		
OUTSIDE LANE	0	
INSIDE LANE	2	Add 1 HOV in each direction
AUXILIARY	1	
OUTSIDE SHOULDER	1	
RETAINING WALL	0.5	
SOUND WALL	0.3	Measured "Residential" areas based on 2004 General Plan (Approximately 9.2 miles total).
RAMPS TOTAL	45	Includes all freeway to freeway ramps.

BRIDGE FACTORS:		
BRIDGE WIDEN FACTOR (SINGLE)	-	
BRIDGE WIDEN FACTOR (MULTI)	50	Assume widen to accommodate 2-HOV, 2-buffer, 2-shoulder, and barrier.
BRIDGE REPLACE LENGTH	-	Assume all overcrossings can accommodate widening.
BRIDGE REPLACE WIDTH	-	

RIGHT OF WAY AND UTILITY FACTORS:		
RIGHT OF WAY ACRE/MILE	0.25	
RESIDENTIAL	30%	Approximately 9.2 miles of residential over 30 miles of project. (See Sound wall explanation)
COMMERCIAL	62%	
UNDEVELOPED LAND	8%	Approximately 2.5 miles of non-develop land over 30 miles of project. (See Sound wall explanation)
HIGH DENSITY UTILITIES	50%	
LOW DENSITY UTILITIES	50%	

OTHER FACTORS:		
FWY TO FWY INTERCHANGES	2	Devore interchange (I-15/I-215) not included in project.
MAJOR DRAINAGE FACILITIES	0	
MAJOR WATER CROSSINGS	2	Lytle Creek and Cajon Creek
RAILROAD OVERCROSSINGS	0	
RAILROAD UNDERCROSSINGS	3	

GENERAL ASSUMPTIONS AND NOTES:

Assume sufficient right of way in median to accommodate most of widening with the exception of slight outside widening (approximately 5 feet on each side).

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Median (ETW to ETW) is approximately 65 feet wide from the county line to just north of Jurupa. From just north of Jurupa to just north of Foothill the median is approximately 40 to 45 feet wide. From just north of Foothill to just north of the Cajon Creek Crossing the median is varies between 65 and 70 feet with some areas as wide as 75 feet.

Topography gets hilly (adjacent to I-15) north of the Lytle Creek crossing San Bernardino National Forest (west side) and Glen Helen Regional Park (east side) .

Per PB's comprehensive corridor study, the existing I-15 between SR 60 and US-395 is an 8 lane facility with a 10 to 15 ft median and 4-8 ft median shoulder, 4-12 ft travel lanes (in each direction) and an 8 to 12 ft outside shoulder. There is approximately 12 to 24 ft of additional vacant right of way (outside).

Per PB's report, the following auxiliary lanes are existing: NORTHBOUND-Jurupa on-ramps to I-10 off-ramps, I-10 on-ramps to 4th off ramp, Baseline on-ramp to SR 210 off-ramp SOUTHBOUND- Summit on-ramp to SR 210 off ramps, SR 210 on-ramps to Baseline off-ramps, 4th Street on-ramp to I-10 off ramps, I-10 on-ramps to Jurupa off-ramps.

Per PB's report, the HOV alternative would result in a right of way impact of about 2 1/2 acres.

Potential seismic considerations in Devore IC vicinity.

REFERENCE DOCUMENTS:

I-15 Comprehensive Corridor Study, Final Report. Parsons Brinckerhoff. December 20, 2005.

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES: (South to North)

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (FT)	NOTES
1	Airport Undercrossing	180	2	9,000	WB I-10 to SB I-215 ramp part of L structure (looking north). Approximately 35 foot gap between structures.
2	Railroad Undercrossing	195	2	9,750	Railroad. Approximately 35 foot gap between structures.
3	I-10 Undercrossing	250	2	12,500	Approximately 35 foot gap between structures.
4	Ontario Mills Parkway Undercrossing	160	2	8,000	Approximately 35 foot gap between structures. I-15/I-10 ramps portion of structures.
5	4th Street Undercrossing	190	2	9,500	Interchange with 4 ramps are part of the overcrossing structure. Approximately 30 foot gap between structures.
6	6th Street Undercrossing	165	2	8,250	Approximately 35 foot gap between structures.
7	? Undercrossing	135	2	6,750	Approximately 30 foot gap between structures.
8	BNSF/SCRRA Undercrossing	180	2	9,000	Railroad. Approximately 30 foot gap between structures.
9	Day Creek Crossing	320	2	16,000	Approximately 30 foot gap between structures. Skew.
10	Arrow Undercrossing*	210	2	10,500	Approximately 30 foot gap between structures. Skew. Future interchange location.
11	Foothill Undercrossing	290	2	14,500	Interchange with 6 ramps. Approximately 30 foot gap between structures.
12	Etiwanda/Church/Miller St Undercrossing	320	2	16,000	Bridges over intersection. Approximately 55 foot gap between structures.
13	Baseline/East Ave Undercrossing (L)*	515	1	12,875	Bridges over intersection. Bridge part of separate interchange project. Interchange with 4 ramps. Approximately 50 foot gap between structures. Skew
	Baseline/East Ave Undercrossing (R)*	640	1	16,000	
14	? Undercrossing	170	2	8,500	Approximately 70 foot gap between structures.
15	Victoria Street Undercrossing	180	2	9,000	Approximately 70 foot gap between structures. Skew
16	Etiwanda-Sevaine Flood Control Channel Undercrossing	135	2	6,750	Approximately 45 foot gap between structures.
17	Cherry Undercrossing	270	2	13,500	Approximately 55 foot gap between structures. Skew
18	Sierra Undercrossing*	185	2	9,250	Bridge part of separate interchange project Interchange has 4 ramps. Approximately 50 foot gap between structures.
19	Lytle Creek Undercrossing	2,025	2	101,250	Water crossing. Approximately 50 foot gap between structures.
20	Wash UC?	-	-	-	Looks like there could be a crossing here, but hard to tell. Likely a culvert
21	Glen Helen Pkwy Undercrossing	150	2	7,500	Interchange with 4 ramps. Approximately 65 foot gap between structures.
22	Glen Helen Rd Undercrossing	205	2	10,250	Approximately 65 foot gap between structures. Skew.
23	BNSF/UP Undercrossing	280	2	-	Railroad. Approximately 60 foot gap between structures. Structure reconfiguration part of Devore IC.
24	Cajon Creek Wash Bridge (R)	575	1	-	Water crossing. Ramps part of structure. There is a bend in the structure. Approximately 60 foot gap between structures. Structure reconfiguration part of Devore IC.
	Cajon Creek Wash Bridge (L)	600	1	-	
TOTAL WIDEN		8,525	46	324,625	

Assumptions/Notes:

Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Jurupa Overcrossing	-	-	-	Interchange with 4 ramps
2	WB I-10 to SB I-15 Connector	-	-	-	
3	NB I-15 to WB I-10 Connector	-	-	-	
4	SB I-15 to EB I-10 Connector	-	-	-	
5	EB I-10 to NB I-15 Connector	-	-	-	
6	EB SR 210 to NB I-15 Connector	-	-	-	
7	SB I-15 to EB SR 210 Connector	-	-	-	
8	WB SR 210 to SB I-15 Connector	-	-	-	
9	Summit Avenue Overcrossing	-	-	-	Interchange with 4 ramps.
10	Duncan Canyon Overcrossing*	-	-	-	Bridge part of separate interchange project. (Will be new interchange)
TOTAL REPLACE		0	0	0	

Assumptions/Notes:
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

I-215 Bi-County Widening Project from Riverside County Line to I-10

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$93,295,000**
Right of Way		**$294,234,000**
Utility Relocations		**$13,500,000**
Construction Items		
Roadway Construction	$127,275,000	
Wall Construction	$31,625,000	
Structures Construction	$49,667,200	
Mobilization	$20,857,000	
Construction Contingency	$31,286,000	
Additional Construction Items	$22,000,000	
Total Construction Cost		**$282,711,000**
Total Project Cost		**$683,740,000**

I-215 Widening
from Riverside County Line to I-10

Total Miles	**5**
Outside Lane constructed over existing shoulder	**2**
Outside Lane	**6**
Outside Shoulder	**2**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$93,295,000**
2	***Right of Way***			
	Right of Way (acre/mile)	7.2		
	Residential (SF)			$18,033,840
	Commercial (SF)			$268,155,360
	Undeveloped land (SF)			$8,044,661
	TOTAL Right of Way Cost			**$294,234,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	0%	$1,350,000	$0
	High Density	100%	$2,700,000	$13,500,000
	TOTAL Utilities Cost			**$13,500,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	10	$50,000	$500,000
	Earthwork - Other lanes	30	$465,000	$13,950,000
	Earthwork - Shoulder	10	$1,495,000	$14,950,000
	Pavement - Lanes	40	$573,000	$22,920,000
	Pavement - Shoulder	10	$477,000	$4,770,000
	Subtotal - Outside Paving and Earthwork			$57,090,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	20	$58,000	$1,160,000
	Pavement - Lanes	10	$573,000	$5,730,000
	Pavement - Shoulder	10	$477,000	$4,770,000
	Subtotal - Inside Paving			$11,660,000
4c	*Barrier*			
	Center barrier per mile	5	$500,000	$2,500,000
	Other barrier per mile	5	$160,000	$800,000
	Subtotal - Barrier			$3,300,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	2.00	$535,000	$10,700,000
	Ramp Mod. (ea. ramp)	21	$100,000	$2,100,000
	Subtotal Misc. Paving			$12,800,000
	Subtotal Earthwork, Paving, and Barrier			$84,850,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$4,242,500
	Front End Work	15%		$12,727,500
	Drainage	15%		$12,727,500
	Electrical	5%		$4,242,500
	Miscellaneous	10%		$8,485,000
	Subtotal Other Roadway Items			$42,425,000
	TOTAL Roadway Construction Cost			**$127,275,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	200%	$3,000,000	$30,000,000
	Soundwall per mile	25%	$1,300,000	$1,625,000
	TOTAL Wall Construction Cost			**$31,625,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	139,300	$250	$34,825,000
	U/C Widening (sf)	63,975	$232	$14,842,200
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$49,667,200**
	SUBTOTAL CONSTRUCTION COST			**$208,568,000**
8	***Mobilization***	10%		$20,857,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$31,286,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	1	$500,000	$500,000
	Major Freeway/Freeway I/C	1	$15,000,000	$15,000,000
	Major Drainage Systems (ea.)	2	$2,000,000	$4,000,000
	Landscape (per mile)	5	$500,000	$2,500,000
	Subtotal Additional Features			$22,000,000
11	**TOTAL CONSTRUCTION COST**			**$282,711,000**
12	**TOTAL PROJECT COST**			**$683,740,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	I-215 Widening (I-215 Bi-County Project)
PROJECT LIMITS:	Riverside County Line to I-10 (Riv Co Line to Orange Show Rd)
PROJECT LENGTH:	5 miles
PROJECT SCOPE:	Add 1 mixed flow lane and 1 HOV in each direction

ROADWAY FACTORS:		
OUTSIDE LANE	2	Per the scope of the current PR/ED effort and consistent with the Route Concept Report, add 1 mixed flow in each direction. (Does not account for total replacement of existing pavement.
INSIDE LANE	2	Per the scope of the current PR/ED effort and consistent with the Route Concept Report add 1 HOV in each direction.
AUXILIARY	2	Assume 1 auxiliary lane on each side for entire length of corridor.
OUTSIDE SHOULDER	1	Assume half outside shoulder width of widening required along entire length of project (both sides)
RETAINING WALL	2	Assume retaining walls will be required over most of the length of the project due to the proximity of businesses to freeway and due to topography (Grand Terrace area).
SOUND WALL	0.25	Assumes approximately 1 mile of sound wall needed total for a total project length of 10 miles.
RAMPS TOTAL	21	Includes I-215/I-10 ramps.

BRIDGE FACTORS:		
BRIDGE WIDEN FACTOR (SINGLE)	-	
BRIDGE WIDEN FACTOR (MULTI)	-	Values estimated from LAN's preliminary engineering used for each bridge replacement/widen.
BRIDGE REPLACE LENGTH	-	
BRIDGE REPLACE WIDTH	-	

RIGHT OF WAY AND UTILITY FACTORS:		
RIGHT OF WAY ACRE/MILE	7.2	Assumes approximately 60 foot take over a 5 mile distance. This mostly accounts for pushing out area with existing frontage road.
RESIDENTIAL	5%	
COMMERCIAL	94%	
UNDEVELOPED LAND	1%	
HIGH DENSITY UTILITIES	100%	Assumed to be high density due to the high density of development adjacent to the corridor.
LOW DENSITY UTILITIES	0%	

OTHER FACTORS:		
FWY TO FWY INTERCHANGES	1	I-215/I-10
MAJOR DRAINAGE FACILITIES	2	
MAJOR WATER CROSSINGS	1	Santa Ana River
RAILROAD OVERCROSSINGS	2	BNSF and UPRR Lines in Grand Terrace/Colton Area
RAILROAD UNDERCROSSINGS	1	UPRR

GENERAL ASSUMPTIONS AND NOTES:

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Assumes that the Iowa/La Cadena interchange stays at existing location. This worksheet does not assume a new structure at Main St.

All bridge overcrossings will require replacement due to vertical and horizontal clearance. This will require either lowering of freeway, elevating the local roads, or a combination of both.

The estimated dimensions for bridge widening/replacement assumes full standard geometry for the freeway and for the overcrossing streets.

Assume that all pavement for freeway gets replaced during this project.

REFERENCE DOCUMENTS:

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES: (North to South)

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	WIDEN (FT)	WIDEN AREA (SQ FT)	NOTES
1	Fairway Dr/Santa Ana River Undercrossing (R)	710	5	3,550	Water Crossing. Bridge widen portion is average value.
	Fairway Dr/Santa Ana River Undercrossing (L)	760	10	7,600	
2	I-10 Undercrossing (R)	260	20	5,200	
	I-10 Undercrossing (L)	260	30	7,800	
3	Steel Road/UPRR/Cooley Road Undercrossing (R)	750	20	15,000	Railroad.
	Steel Road/UPRR/Cooley Road Undercrossing (L)	750	30	22,500	
4	Reche Canyon Creek UC (Channel Crossing)	-	-	-	Culvert?
5	SB I-215 to WB I-10 Connector	775	3	2,325	Bridge widen portion is average value.
TOTAL WIDEN		4,265	118	63,975	

Assumptions/Notes:
R/L Designation looking North.
Bridge dimensions from LANs estimates based on preliminary geometry, values rounded to the nearest 5 foot increment.

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	ASSUMED BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE LENGTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Orange Show Road Overcrossing			-	Assume accommodates widening. Interchange with 5 ramps.
2	East 10 to N 215 Connector Overcrossing			-	Assume accommodates widening
3	South 215 to East 10 Connector Overcrossing			-	Assume accommodates widening
4	West 10 to South 215 Connector Overcrossing			-	Assume accommodates widening
5	Washington/Mt. Vernon Overcrossing	130	265	34,450	Interchange with 5 ramps.
6	Newport Ave Overcrossing	65	200	13,000	Assume Newport is 35 feet wide Skew
7	Barton Rd Overcrossing	130	290	37,700	Interchange with 4 ramps. Skew
8	UP Overcrossing	25	310	7,750	Railroad. Steel Structure. Skew
9	BNSF Overcrossing	40	380	15,200	Railroad. Steel Structure. Skew. Replacement length for this bridge is estimates at 380 feet, which is used for calculation (not automatic area calc).
10	Iowa/La Cadena Overcrossing	130	240	31,200	Interchange with 4 ramps. Skew
TOTAL REPLACE		520	1,685	139,300	

Assumptions/Notes:
All overcrossings will need to be replaced with the exception of Orange Show Road and the I-10/I-215 connectors.
Assumed bridges have closed end abutments.
Bridge dimensions from LANs estimates based on preliminary geometry, values rounded to the nearest 5 foot increment.

I-215 Northern Widening Project from SR-210 to I-15

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$28,830,000**
Right of Way		**$43,003,000**
Utility Relocations		**$10,800,000**
Construction Items		
Roadway Construction	$45,047,000	
Wall Construction	$14,600,000	
Structures Construction	$5,440,400	
Mobilization	$6,509,000	
Construction Contingency	$9,764,000	
Additional Construction Items	$6,000,000	
Total Construction Cost		**$87,361,000**
Total Project Cost		**$169,994,000**

I-215 Widening
from SR-30/210 to I-15

Total Miles	8
Outside Lane constructed over existing shoulder	0.5
Outside Lane	0
Outside Shoulder	1
HOV/Inside Lanes	2
Inside Shoulder	2

Assumes AC Pavement

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$28,830,000**
2	***Right of Way***			
	Right of Way (acre/mile)	4		
	Residential (SF)			$16,030,080
	Commercial (SF)			$6,272,640
	Undeveloped land (SF)			$20,699,712
	TOTAL Right of Way Cost			**$43,003,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	100%	$1,350,000	$10,800,000
	High Density	0%	$2,700,000	$0
	TOTAL Utilities Cost			**$10,800,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	4	$50,000	$200,000
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	8	$980,000	$7,840,000
	Pavement - Lanes	4	$357,000	$1,428,000
	Pavement - Shoulder	8	$297,000	$2,376,000
	Subtotal - Outside Paving and Earthwork			$11,844,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	32	$58,000	$1,856,000
	Pavement - Lanes	16	$357,000	$5,712,000
	Pavement - Shoulder	16	$297,000	$4,752,000
	Subtotal - Inside Paving			$12,320,000
4c	*Barrier*			
	Center barrier per mile	8	$500,000	$4,000,000
	Other barrier per mile	8	$160,000	$1,280,000
	Subtotal - Barrier			$5,280,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	12	$100,000	$1,200,000
	Subtotal Misc. Paving			$1,200,000
	Subtotal Earthwork, Paving, and Barrier			$30,644,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$1,532,200
	Front End Work	15%		$4,596,600
	Drainage	12%		$3,677,280
	Electrical	5%		$1,532,200
	Miscellaneous	10%		$3,064,400
	Subtotal Other Roadway Items			$14,402,680
	TOTAL Roadway Construction Cost			**$45,047,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	50%	$3,000,000	$12,000,000
	Soundwall per mile	25%	$1,300,000	$2,600,000
	TOTAL Wall Construction Cost			**$14,600,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	23,450	$232	$5,440,400
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$5,440,400**
	SUBTOTAL CONSTRUCTION COST			**$65,088,000**
8	***Mobilization***	10%		$6,509,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$9,764,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	0	$500,000	$0
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	1	$2,000,000	$2,000,000
	Landscape (per mile)	8	$500,000	$4,000,000
	Subtotal Additional Features			$6,000,000
11	**TOTAL CONSTRUCTION COST**			**$87,361,000**
12	**TOTAL PROJECT COST**			**$169,994,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	I-215 Widening
PROJECT LIMITS:	SR30/210 to I-15
PROJECT LENGTH:	8 miles
PROJECT SCOPE:	Add 1 HOV each direction

ROADWAY FACTORS:

OUTSIDE LANE	0	
INSIDE LANE	2	
AUXILIARY	0.25	
OUTSIDE SHOULDER	1	
RETAINING WALL	0.5	
SOUND WALL	0.25	Based on residences located close to freeway
RAMPS TOTAL	14	

BRIDGE FACTORS:

BRIDGE WIDEN FACTOR (SINGLE)	-	
BRIDGE WIDEN FACTOR (MULTI)	50	Assumes 40 feet widening to close gap between structures and about 10 feet of outside widening.
BRIDGE REPLACE LENGTH	-	Assume existing overcrossings can accommodate an additional lane.
BRIDGE REPLACE WIDTH	-	

RIGHT OF WAY AND UTILITY FACTORS:

RIGHT OF WAY ACRE/MILE	4	Majority of right of way impacts from Little League Drive and north to end of project limits. There is a major drainage on the east side and an access road that extends approximately 3 miles. Assuming 100 feet needed for extra lane, shoulder, and 4:1 slopes.
RESIDENTIAL	50%	Undeveloped land north of Little League drive is mostly zoned residential per 2004 General Plan, will assume residential for right of way estimation purposes.
COMMERCIAL	35%	
UNDEVELOPED LAND	15%	
HIGH DENSITY UTILITIES	0%	
LOW DENSITY UTILITIES	100%	Majority of project area is vacant or low density.

OTHER FACTORS:

FWY TO FWY INTERCHANGES	1	Excludes the I-215/I-15 interchange
MAJOR DRAINAGE FACILITIES	1	
MAJOR WATER CROSSINGS	0	
RAILROAD OVERCROSSINGS	0	
RAILROAD UNDERCROSSINGS	0	

GENERAL ASSUMPTIONS AND NOTES:

Assume sufficient right of way in median to accommodate most of widening with the exception of slight outside widening (approximately 5 feet on each side)..

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Existing pavement section is asphalt concrete, assume existing pavement will remain. Assume added lanes will also be asphalt concrete.

Overcrossings that are included in the Valley Interchange Project list from Expenditure Plan/Nexus Study are not included in the I-10 HOV Project estimate.

Assume pavement will be asphalt concrete to match existing.

REFERENCE DOCUMENTS:

SR 210 Segment 11 Contract 3 plans

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES: (North to South)

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (SQ FT)	NOTES
1	North Palm Undercrossing*	150	2	7,500	Interchange with 4 ramps
2	Cable Creek Channel Undercrossing	147	2	7,350	
3	Devil Creek Diversion Undercrossing	62	2	3,100	
4	University Parkway Undercrossing*	110	2	5,500	Interchange with 4 ramps
5	Golf Cart Undercrossing?	0	0	0	Assume no change
TOTAL WIDEN				23,450	

Assumptions/Notes:

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	UNIQUE INFORMATION
1	Glen Helen Pkwy/Devore Rd Overcrossing*	-	-	-	Interchange with 4 ramps.
2	N. Little League Overcrossing	-	-	-	
TOTAL REPLACE			0		

Assumptions/Notes:

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

Overcrossings assumed to accommodate widening.

SR-210 Widening Project (Alt. 1) from I-215 to I-10

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$32,311,000**
Right of Way		**$1,060,000**
Utility Relocations		**$6,750,000**
Construction Items		
Roadway Construction	$26,112,000	
Wall Construction	$17,325,000	
Structures Construction	$33,292,000	
Mobilization	$7,673,000	
Construction Contingency	$11,510,000	
Additional Construction Items	$2,000,000	
Total Construction Cost		**$97,912,000**
Total Project Cost		**$138,033,000**

SR-30/210 Widening (Alternative 1) from I-215 to I-10

Total Miles	**5**
Outside Lane constructed over existing shoulder	**0**
Outside Lane	**0**
Outside Shoulder	**0**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Construct one inside lane and shoulder each direction where needed - about 5 miles.

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$32,311,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.05		
	Residential (SF)			$500,940
	Commercial (SF)			$490,050
	Undeveloped land (SF)			$68,607
	TOTAL Right of Way Cost			**$1,060,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	100%	$1,350,000	$6,750,000
	High Density	0%	$2,700,000	$0
	TOTAL Utilities Cost			**$6,750,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	0	$50,000	$0
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	0	$1,495,000	$0
	Pavement - Lanes	0	$573,000	$0
	Pavement - Shoulder	0	$477,000	$0
	Subtotal - Outside Paving and Earthwork			$0
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	20	$58,000	$1,160,000
	Pavement - Lanes	10	$573,000	$5,730,000
	Pavement - Shoulder	10	$477,000	$4,770,000
	Subtotal - Inside Paving			$11,660,000
4c	*Barrier*			
	Center barrier per mile	10	$500,000	$5,000,000
	Other barrier per mile	10	$160,000	$1,600,000
	Subtotal - Barrier			$6,600,000
	Adjust mileage to account for entire 10 mile reach			
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	0	$100,000	$0
	Subtotal Misc. Paving			$0
	Subtotal Earthwork, Paving, and Barrier			$18,260,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$913,000
	Front End Work	15%		$2,739,000
	Drainage	8%		$1,460,800
	Electrical	5%		$913,000
	Miscellaneous	10%		$1,826,000
	Subtotal Other Roadway Items			$7,851,800
	TOTAL Roadway Construction Cost			**$26,112,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	25%	$1,900,000	$2,375,000
	Soundwall per mile	230%	$1,300,000	$14,950,000
	TOTAL Wall Construction Cost			**$17,325,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	143,500	$232	$33,292,000
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$33,292,000**
	SUBTOTAL CONSTRUCTION COST			**$76,729,000**
8	***Mobilization***	10%		$7,673,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$11,510,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	2	$1,000,000	$2,000,000
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	0	$500,000	$0
	Subtotal Additional Features			$2,000,000
11	**TOTAL CONSTRUCTION COST**			**$97,912,000**
12	**TOTAL PROJECT COST**			**$138,033,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	SR 210/30 Widening
PROJECT LIMITS:	Highland Ave to San Bernardino
PROJECT LENGTH:	5 miles
PROJECT SCOPE:	Add 1 mixed flow in each direction and widen undercrossings (per 2004 RTP). The scope is further assumed to mean adding one mixed flow in each direction to match up to the areas that are already 3 lanes in each direction.

ROADWAY FACTORS:		
OUTSIDE LANE	0	
INSIDE LANE	2	Assume 1 lane in each direction to fill gap to make 3 lanes in each direction.
AUXILIARY	0	
OUTSIDE SHOULDER	0	
RETAINING WALL	0.25	
SOUND WALL	2.3	Project area predominantly residential. Assume wall on both sides of freeway for a distance of about 6 1/2 miles.
RAMPS TOTAL	10	
BRIDGE FACTORS:		
BRIDGE WIDEN FACTOR (SINGLE)	-	
BRIDGE WIDEN FACTOR (MULTI)	50	
BRIDGE REPLACE LENGTH	-	Assumed that all overcrossings can accommodate widening.
BRIDGE REPLACE WIDTH	-	
RIGHT OF WAY AND UTILITY FACTORS:		
RIGHT OF WAY ACRE/MILE	0.05	Assumed that addition of a lane can be mostly accommodated within existing right of way.
RESIDENTIAL	72%	The remainder of the project area (minus commercial and undeveloped land) per aerials and 2004 General Plan.
COMMERCIAL	20%	Approximately 4 miles out of a total 20 project miles are commercial per the 2004 General Plan.
UNDEVELOPED LAND	9%	Approximately 1.7 miles out of a total 20 project miles are undeveloped. This area is primarily around the Santa Ana River/City Creek crossings.
HIGH DENSITY UTILITIES	0%	
LOW DENSITY UTILITIES	100%	Assumed to be low density utilities because primarily residential
OTHER FACTORS:		
FWY TO FWY INTERCHANGES	1	
MAJOR DRAINAGE FACILITIES	0	
MAJOR WATER CROSSINGS	2	There are three bridges crossing the Santa Ana River and 1 bridge crossing at City Creek.
RAILROAD OVERCROSSINGS	0	
RAILROAD UNDERCROSSINGS	0	

GENERAL ASSUMPTIONS AND NOTES:

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

(From East to West) From I-10 to City Creek, freeway is elevated, from City Creek to Highland the freeway is depressed, Highland to project limits, freeway is elevated.

From I-215 to just east of H street, SR 30 is only 2 lanes in each direction. SR 210, Segment 11 Mainline will build a median lane and re-stripe (from east of Miramonte Dr) in each direction to match up to the 3 lanes in each direction. The 3 lanes in each direction is from I-259 to Highland Ave interchange after which it drops to two lanes in each direction until around San Bernardino IC near the SR 30/I-10 IC where it increase to 3 in each direction.

The median width (herein defined as ETW to ETW) from I-215 (just east of Miramonte) to I-259 will be 55 feet per the SR 210 Segment 11 Mainline plans. The median width from I-259 to Highland Ave Undercrossing is between 50 and 55 ft. The median from Highland to Victoria varies between 60 and 70 feet (in some areas as much as 74 feet). From Victoria to the 30/330 IC the median gets as wide as about 80 feet. From SR 300 to about City Creek the median is approximately 75 ft. From City Creek south past the Santa Ana River crossing, the median is between 55 and 60 feet wide. South of the Santa Ana River crossing, the median is approximately 65 ft. The median width for the area south of the Santa Ana River bridges to the SR 30/I-10 interchange is approximately 40 ft.

All overcrossings are assumed to be able to accommodate widening. If an overcrossing is planned to be widened as part of a major street project, it is assumed to be part of the major street project and not the freeway project.

REFERENCE DOCUMENTS:

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES: (East to West)

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (SQ FT)	NOTES
1	Lugonia Undercrossing	170	2	-	Ramps are included in bridge width. Gap between bridges is approximately 140 feet.
2	San Bernardino Undercrossing	185	2	9,250	Interchange with 4 ramps. Gap between bridges is approximately 40 feet.
3	Pioneer Undercrossing	140	2	7,000	Ramps are included in bridge width. Gap between bridges is approximately 35 feet.
4	Santa Ana River Undercrossing	895	2	44,750	Water crossing. Gap between bridges is approximately 50 feet.
5	Santa Ana River Crossing 2	145	2	7,250	Water crossing. Gap between bridges is approximately 50 feet.
6	Santa Ana River Crossing 3	185	2	9,250	Water crossing. Gap between bridges is approximately 50 feet.
7	5th Street Undercrossing*	200	2	10,000	Interchange with 4 ramps. Gap between bridges is approximately 70 feet.
8	City Creek Channel Undercrossing	655	2	32,750	Water crossing. Portion of the 5th Street ramps are part of structure.
9	Victoria Undercrossing	200	2	10,000	Gap between bridges is approximately 65 feet.
10	Sand Creek Channel Undercrossing	265	2	13,250	Gap between bridges is approximately 65 feet.
11	Arden Ave/Highland Ave Undercrossing (R)	630	1	-	Interchange with 4 ramps. Skewed. (R/L designation looking west). Gap between bridges is approximately 65 feet.
	Highland Ave Undercrossing (L)	820	1	-	
12	Sterling Ave Undercrossing	180	2	-	Skew. Gap between bridges is approximately 45 feet.
13	Del Rosa Undercrossing*	200	2	-	Interchange with 4 ramps. Slight skew. Gap between bridges is approximately 50 feet.
14	Golden Ave Undercrossing	155	2	-	Gap between bridges is approximately 45 feet.
15	East Twin Channel Undercrossing	85	2	-	Gap between bridges is approximately 45 feet.
16	Miramonte Undercrossing	160	2	-	
17	Little Mountain Undercrossing	205	2	-	
TOTAL WIDEN				143,500	

Assumptions/Notes:

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

Bridge lengths measured from SANBAG GIS resources, values rounded up to the nearest 5 foot increment.

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Baseline Overcrossing*	-	-	-	Interchange with 4 ramps.
2	SR30/SR330 Overcrossing (West to South)	-	-	-	
3	Pedestrian Overcrossing	-	-	-	
4	SR 30/SR330 Overcrossing (East to North)	-	-	-	
5	Palm Overcrossing	-	-	-	
6	Orange Overcrossing	-	-	-	
7	Central Avenue Overcrossing	-	-	-	
8	Valencia Overcrossing	-	-	-	
9	Waterman Overcrossing *	-	-	-	Interchange with 4 ramps.
10	Sierra Overcrossing	-	-	-	
11	Mt. View Overcrossing	-	-	-	2 bridges
12	Arrowhead Overcrossing	-	-	-	
13	E Street Overcrossing	-	-	-	
14	SR 30/SR 259 (West to South) Overcrossing	-	-	-	
15	H Street Overcrossing	-	-	-	Interchange with 4 ramps.
16	Muscupiabe Overcrossing	-	-	-	2 bridges

Assumptions/Notes:
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

SR-210 Widening Project (Alt. 2) from I-215 to I-10

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$86,985,000**
Right of Way		**$7,312,000**
Utility Relocations		**$15,836,000**
Construction Items		
Roadway Construction	$84,448,000	
Wall Construction	$14,490,000	
Structures Construction	$86,333,000	
Mobilization	$18,528,000	
Construction Contingency	$27,791,000	
Additional Construction Items	$32,000,000	
Total Construction Cost		**$263,590,000**
Total Project Cost		**$373,723,000**

SR-30/210 Widening (Alternative 2) from I-215 to I-10

Total Miles	**11.5**
Outside Lane constructed over existing shoulder	**0.86**
Outside Lane	**0**
Outside Shoulder	**0.7**
HOV/Inside Lanes	**2**
Inside Shoulder	**2**

Construct one inside lane and shoulder each direction where needed - about 5 miles.
Construct one HOV lane in each direction from 27th Street to I-10 - about 11-1/2 miles

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$86,985,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.15		
	Residential (SF)			$3,456,486
	Commercial (SF)			$3,381,345
	Undeveloped land (SF)			$473,388
	TOTAL Right of Way Cost			**$7,312,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	98%	$1,350,000	$15,214,500
	High Density	2%	$2,700,000	$621,000
	TOTAL Utilities Cost			**$15,836,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	9.89	$50,000	$494,500
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	8.05	$1,495,000	$12,034,750
	Pavement - Lanes	9.89	$573,000	$5,666,970
	Pavement - Shoulder	8.05	$477,000	$3,839,850
	Subtotal - Outside Paving and Earthwork			$22,036,070
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	46	$58,000	$2,668,000
	Pavement - Lanes	23	$573,000	$13,179,000
	Pavement - Shoulder	23	$477,000	$10,971,000
	Subtotal - Inside Paving			$26,818,000
4c	*Barrier*			
	Center barrier per mile	10	$500,000	$5,000,000
	Other barrier per mile	10	$160,000	$1,600,000
	Subtotal - Barrier			$6,600,000
	Adjust mileage to account for entire 10 mile reach			

4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			
	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	36	$100,000	$3,600,000
	Subtotal Misc. Paving			$3,600,000
	Subtotal Earthwork, Paving, and Barrier			$59,054,070
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$2,952,704
	Front End Work	15%		$8,858,111
	Drainage	8%		$4,724,326
	Electrical	5%		$2,952,704
	Miscellaneous	10%		$5,905,407
	Subtotal Other Roadway Items			$25,393,250
	TOTAL Roadway Construction Cost			**$84,448,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	15%	$1,900,000	$3,277,500
	Soundwall per mile	75%	$1,300,000	$11,212,500
	TOTAL Wall Construction Cost			**$14,490,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	372,125	$232	$86,333,000
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$86,333,000**
	SUBTOTAL CONSTRUCTION COST			**$185,271,000**
8	***Mobilization***	10%		$18,528,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$27,791,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	2	$1,000,000	$2,000,000
	Major Freeway/Freeway I/C	2	$15,000,000	$30,000,000
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	0	$500,000	$0
	Subtotal Additional Features			$32,000,000
11	**TOTAL CONSTRUCTION COST**			**$263,590,000**
12	**TOTAL PROJECT COST**			**$373,723,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

PROJECT:	SR 210/30 Widening
PROJECT LIMITS:	27th Street to I-10
PROJECT LENGTH:	11.5 miles
PROJECT SCOPE:	Add 1 mixed flow in each direction and widen undercrossings (per 2004 RTP) and I HOV in each direction to have a total freeway cross section of 3 mixed flow and 1 HOV in each direction. Mixed flow lane addition only in areas that are currently 2 mixed flow in each direction.

ROADWAY FACTORS:

OUTSIDE LANE	0.56	Approximately 5 miles of the project length will have a mixed flow lane added. The limits are from Highland Ave IC to San Bernardino IC. Within these limits there will be an approximately 16 feet of additional outside widening needed to accommodate both HOV and MF lanes.
INSIDE LANE	2.43	
AUXILIARY	1	
OUTSIDE SHOULDER	1	
RETAINING WALL	0.15	
SOUND WALL	0.75	
RAMPS TOTAL	36	

BRIDGE FACTORS:

BRIDGE WIDEN FACTOR (SINGLE)	-	
BRIDGE WIDEN FACTOR (MULTI)	75	Assume bridges west of SR 259 are widened only 50 feet.
BRIDGE REPLACE LENGTH	-	Assumed that all overcrossings can accommodate widening.
BRIDGE REPLACE WIDTH	-	

RIGHT OF WAY AND UTILITY FACTORS:

RIGHT OF WAY ACRE/MILE	0.1	Assumed that addition of a lane can be mostly accommodated within existing right of way.
RESIDENTIAL	72%	The remainder of the project area (minus commercial and bare land) per aerials and 2004 General Plan.
COMMERCIAL	20%	Approximately 4 miles out of a total 20 project miles are commercial per the 2004 General Plan.
UNDEVELOPED LAND	9%	Approximately 1.7 miles out of a total 20 project miles are "bare land". This area is primarily around the Santa Ana River/City Creek crossings.
HIGH DENSITY UTILITIES	2%	
LOW DENSITY UTILITIES	98%	Assumed to be low density utilities because primarily residential

OTHER FACTORS:

FWY TO FWY INTERCHANGES	3	SR 30/I-215,SR 259/SR30, SR 30/ SR 330, SR 30/I-10 (the 259/30 and 30/330 IC combined are counted as 1 major I/C)
MAJOR DRAINAGE FACILITIES	0	
MAJOR WATER CROSSINGS	2	There are three bridges crossing the Santa Ana River and 1 bridge crossing at City Creek.
RAILROAD OVERCROSSINGS	0	
RAILROAD UNDERCROSSINGS	1	

GENERAL ASSUMPTIONS AND NOTES:

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

(From East to West) From I-10 to City Creek, freeway is elevated, from City Creek to Highland the freeway is depressed, Highland to project limits, freeway is elevated.

From I-215 to just east of H street, SR 30 is only 2 lanes in each direction. SR 210, Segment 11 Mainline will build a median lane and re-stripe (from east of Miramonte Dr) in each direction to match up to the 3 lanes in each direction. The 3 lanes in each direction is from I-259 to Highland Ave interchange after which it drops to two lanes in each direction until around San Bernardino IC near the SR 30/I-10 IC where it increase to 3 in each direction.

The median width (herein defined as ETW to ETW) from I-215 (just east of Miramonte) to I-259 will be 55 feet per the SR 210 Segment 11 Mainline plans. The median width from I-259 to Highland Ave Undercrossing is between 50 and 55 ft. The median from Highland to Victoria varies between 60 and 70 feet (in some areas as much as 74 feet). From Victoria to the 30/330 IC the median gets as wide as about 80 feet. From SR 300 to about City Creek the median is approximately 75 ft. From City Creek south past the Santa Ana River crossing, the median is between 55 and 60 feet wide. South of the Santa Ana River crossing, the median is approximately 65 ft. The median width for the area south of the Santa Ana River bridges to the SR 30/I-10 interchange is approximately 40 ft.

All overcrossings are assumed to be able to accommodate widening. If an overcrossing is planned to be widened as part of a major street project, it is assumed to be part of the major street project and not the freeway project.

REFERENCE DOCUMENTS:

SR 210 Segment 11 Plans - Mainline and Early

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

BRIDGES:

UNDERCROSSINGS (WIDEN)					
ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (SQ FT)	NOTES
1	Lugonia Undercrossing	170	2	8,500	Ramps are included in bridge width. Gap between bridges is approximately 140 feet. Assume widening is 50 feet for HOV lane.
2	San Bernardino Undercrossing	185	2	13,875	Interchange with 4 ramps. Gap between bridges is approximately 40 feet.
3	Pioneer Undercrossing	140	2	10,500	Ramps are included in bridge width. Gap between bridges is approximately 35 feet.
4	Santa Ana River Undercrossing	895	2	67,125	Water crossing. Gap between bridges is approximately 50 feet.
5	Santa Ana River Crossing 2	145	2	10,875	Water crossing. Gap between bridges is approximately 50 feet.
6	Santa Ana River Crossing 3	185	2	13,875	Water crossing. Gap between bridges is approximately 50 feet.
7	5th Street Undercrossing*	200	2	15,000	Interchange with 4 ramps. Gap between bridges is approximately 70 feet.
8	City Creek Channel Undercrossing	655	2	49,125	Water crossing. Portion of the 5th Street ramps are part of structure.
9	Victoria Undercrossing	200	2	15,000	Gap between bridges is approximately 65 feet.
10	Sand Creek Channel Undercrossing	265	2	19,875	Gap between bridges is approximately 65 feet.
11	Arden Ave/Highland Ave Undercrossing (R)	630	1	23,625	Interchange with 4 ramps. Skewed. (R/L designation looking west). Gap between bridges is approximately 65 feet.
	Highland Ave Undercrossing (L)	820	1	30,750	
12	Sterling Ave Undercrossing	180	2	9,000	Skew. Gap between bridges is approximately 45 feet. Assume 50 foot widening.
13	Del Rosa Undercrossing*	200	2	10,000	Interchange with 4 ramps. Slight skew. Gap between bridges is approximately 50 feet.
14	Golden Ave Undercrossing	155	2	7,750	Gap between bridges is approximately 45 feet. Assume 50 foot widening.
15	East Twin Channel Undercrossing	85	2	4,250	Gap between bridges is approximately 45 feet. Assume 50 foot widening.
16	Miramonte Undercrossing	160	2	8,000	Assume 50 foot widening.
17	Little Mountain Undercrossing	205	2	10,250	Assume 50 foot widening.
18	I-215 Undercrossing	355	2	17,750	Assume 50 foot widening.
19	Cajon Blvd Overhead	315	2	15,750	Railroad involvement. Assume 50 foot widening.
20	27th Street Undercrossing	225	3	11,250	One of the structures is for the ES Line. Assume 50 foot widening.
	TOTAL WIDEN			372,125	

Assumptions/Notes:

* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

Bridge lengths measured from SANBAG GIS resources, values rounded up to the nearest 5 foot increment.

SAN BERNARDINO VALLEY FREEWAY PROJECTS WORKSHEET

OVERCROSSINGS (REPLACE)					
ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Baseline Overcrossing*	-	-	-	Interchange with 4 ramps.
2	SR30/SR330 Overcrossing (West to South)	-	-	-	
3	Pedestrian Overcrossing	-	-	-	
4	SR 30/SR330 Overcrossing (East to North)	-	-	-	
5	Palm Overcrossing	-	-	-	
6	Orange Overcrossing	-	-	-	
7	Central Avenue Overcrossing	-	-	-	
8	Valencia Overcrossing	-	-	-	
9	Waterman Overcrossing *	-	-	-	Interchange with 4 ramps.
10	Sierra Overcrossing	-	-	-	
11	Mt. View Overcrossing	-	-	-	2 bridges
12	Arrowhead Overcrossing	-	-	-	
13	E Street Overcrossing	-	-	-	
14	SR 30/SR 259 (West to South) Overcrossing	-	-	-	
15	H Street Overcrossing	-	-	-	Interchange with 4 ramps.
16	Muscupiabe Overcrossing	-	-	-	2 bridges

Assumptions/Notes:
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

Carpool Lane Connector Study
Various Locations

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$0**
Right of Way		**$0**
Utility Relocations		**$0**
Construction Items		
Roadway Construction	$0	
Wall Construction	$0	
Structures Construction	$0	
Mobilization	$0	
Construction Contingency	$0	
Additional Construction Items	$0	
Total Construction Cost		**$0**
Total Project Cost		**$90,000,000**

Carpool Connectors
Various Locations (Study Only)

Total Miles	**0**
Outside Lane constructed over existing shoulder	**0**
Outside Lane	**0**
Outside Shoulder	**0**
HOV/Inside Lanes	**0**
Inside Shoulder	**0**

Construct one inside lane and shoulder each direction where needed - about 5 miles.

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$0**
2	***Right of Way***			
	Right of Way (acre/mile)	0		
	Residential (SF)			$0
	Commercial (SF)			$0
	Undeveloped land (SF)			$0
	TOTAL Right of Way Cost			**$0**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	0%	$1,350,000	$0
	High Density	0%	$2,700,000	$0
	TOTAL Utilities Cost			**$0**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	0	$50,000	$0
	Earthwork - Other lanes	0	$465,000	$0
	Earthwork - Shoulder	0	$1,495,000	$0
	Pavement - Lanes	0	$573,000	$0
	Pavement - Shoulder	0	$477,000	$0
	Subtotal - Outside Paving and Earthwork			$0
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	0	$58,000	$0
	Pavement - Lanes	0	$573,000	$0
	Pavement - Shoulder	0	$477,000	$0
	Subtotal - Inside Paving			$0
4c	*Barrier*			
	Center barrier per mile	0	$500,000	$0
	Other barrier per mile	0	$160,000	$0
	Subtotal - Barrier			$0
	Adjust mileage to account for entire 10 mile reach			
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	0	$100,000	$0
	Subtotal Misc. Paving			$0
	Subtotal Earthwork, Paving, and Barrier			$0
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$0
	Front End Work	15%		$0
	Drainage	5%		$0
	Electrical	5%		$0
	Miscellaneous	10%		$0
	Subtotal Other Roadway Items			$0
	TOTAL Roadway Construction Cost			**$0**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	0%	$1,900,000	$0
	Soundwall per mile	0%	$1,300,000	$0
	TOTAL Wall Construction Cost			**$0**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	0	$232	$0
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$0**
	SUBTOTAL CONSTRUCTION COST			**$0**
8	***Mobilization***	10%		$0
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$0
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	0	$1,000,000	$0
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	0	$500,000	$0
	Subtotal Additional Features			$0
11	**TOTAL CONSTRUCTION COST**			**$0**
12	**TOTAL PROJECT COST**			**$90,000,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

2010-2040 Measure I
Strategic Plan

Cajon Pass
Cost Estimates

July 19, 2006

2010-2040 Measure I Strategic Plan

Cajon Pass Projects

Project Description	Cost Estimate Updated	Cost Estimate Expenditure Plan	Delta
Devore Interchange Project I-15 & I-215	***$201,555,000***	***$40,000,000***	--
I-15 Widening Project (Seg 3) from Devore I/C to Rte 395	***$269,833,000***	***$170,000,000***	--
Total Cajon Pass Projects	***$471,388,000***	***$210,000,000***	***-$261,388,000***

I-15 Widening Project from I15/I215 I/C to US 395

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$59,426,000**
Right of Way		**$10,079,000**
Utility Relocations		**$20,250,000**
Construction Items		
Roadway Construction	$119,770,000	
Wall Construction	$11,250,000	
Structures Construction	$5,440,400	
Mobilization	$13,647,000	
Construction Contingency	$20,470,000	
Additional Construction Items	$9,500,000	
Total Construction Cost		**$180,078,000**
Total Project Cost		**$269,833,000**

I-15 Widening (Segs 3 & 4) from I-215 I/C to Route 395

Total Miles	15
Outside Lane constructed over existing shoulder	0
Outside Lane	0
Outside Shoulder	0
HOV/Inside Lanes	2
Inside Shoulder	2

Assumes AC Pavement

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$59,426,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.5		
	Residential (SF)			$3,757,050
	Commercial (SF)			$1,470,150
	Undeveloped land (SF)			$4,851,495
	TOTAL Right of Way Cost			**$10,079,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	100%	$1,350,000	$20,250,000
	High Density	0%	$2,700,000	$0
	TOTAL Utilities Cost			**$20,250,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - Lump Sum	5	$8	$40,000,000
	Earthwork - N/A	million cy	$0	$0
	Earthwork - N/A		$0	$0
	Pavement - Lanes	0	$573,000	$0
	Pavement - Shoulder	0	$477,000	$0
	Subtotal - Outside Paving and Earthwork			$40,000,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork - N/A	60	$0	$0
	Pavement - Lanes	30	$573,000	$17,190,000
	Pavement - Shoulder	30	$477,000	$14,310,000
	Subtotal - Inside Paving			$31,500,000
4c	*Barrier*			
	Center barrier per mile	15	$500,000	$7,500,000
	Other barrier per mile	15	$160,000	$2,400,000
	Subtotal - Barrier			$9,900,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	0.00	$535,000	$0
	Ramp Mod. (ea. ramp)	12	$100,000	$1,200,000
	Subtotal Misc. Paving			$1,200,000
	Subtotal Earthwork, Paving, and Barrier			$82,600,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$4,130,000
	Front End Work	15%		$12,390,000
	Drainage	10%		$8,260,000
	Electrical	5%		$4,130,000
	Miscellaneous	10%		$8,260,000
	Subtotal Other Roadway Items			$37,170,000
	TOTAL Roadway Construction Cost			**$119,770,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	25%	$3,000,000	$11,250,000
	Soundwall per mile	0%	$1,300,000	$0
	TOTAL Wall Construction Cost			**$11,250,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	23,450	$232	$5,440,400
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$5,440,400**
	SUBTOTAL CONSTRUCTION COST			**$136,461,000**
8	***Mobilization***	10%		$13,647,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$20,470,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	0	$500,000	$0
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	1	$2,000,000	$2,000,000
	Landscape (per mile)	15	$500,000	$7,500,000
	Subtotal Additional Features			$9,500,000
11	**TOTAL CONSTRUCTION COST**			**$180,078,000**
12	TOTAL PROJECT COST			$269,833,000
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

CAJON PASS PROJECTS WORKSHEET

PROJECT:	I-15 Widening - Cajon Pass
PROJECT LIMITS:	I-215 to US 395
PROJECT LENGTH:	6
PROJECT SCOPE:	Add 1 HOV in each direction.

ROADWAY FACTORS:

OUTSIDE LANE		
INSIDE LANE	2	
AUXILIARY	-	
OUTSIDE SHOULDER	2	
RETAINING WALL	0.25	
SOUND WALL	0.25	
RAMPS TOTAL	8	Does not include proposed interchange ramps.

BRIDGE FACTORS:

BRIDGE WIDEN FACTOR (SINGLE)	52
BRIDGE WIDEN FACTOR (MULTI)	-
BRIDGE REPLACE LENGTH	-
BRIDGE REPLACE WIDTH	-

RIGHT OF WAY AND UTILITY FACTORS:

RIGHT OF WAY ACRE/MILE	0.2	Approx. 8 (3.5 Seg 2)miles of frontage road on NB side of freeway and about 5 (3 Seg 2) miles on SB side adjacer
RESIDENTIAL	15%	
COMMERCIAL	50%	
UNDEVELOPED LAND	35%	
HIGH DENSITY UTILITIES	60%	
LOW DENSITY UTILITIES	40%	

OTHER FACTORS:

FWY TO FWY INTERCHANGES	0
MAJOR DRAINAGE	0
MAJOR WATER CROSSINGS	1
RAILROAD OVERCROSSINGS	0
RAILROAD UNDERCROSSINGS	1

GENERAL ASSUMPTIONS AND NOTES:

Assume sufficient right of way in median to accommodate most of widening with the exception of slight outside widening (approximately 5 feet on each side).

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Per PBs comprehensive corridor study, the existing I-15 between SR 60 and US-395 is an 8 lane facility with a 10 to 15 ft median and 4-8 ft median shoulder, 4-12 ft travel lanes (in each direction) and an 8 to 12 ft outside shoulder. There is approximately 12 to 24 ft of additional vacant right of way (outside).

Per PBs report, there is a truck climbing lane on northbound I-15 from SR 138 to the Cajon Summit.

REFERENCE DOCUMENTS:

I-15 Comprehensive Corridor Study, Final Report. Parsons Brinckerhoff. December 20, 2005.

CAJON PASS PROJECTS WORKSHEET

BRIDGES: (South to North)

UNDERCROSSINGS (WIDEN)

ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (FT)	NOTES
1	Kenwood Avenue Undercrossing	150	2		Interchange with 4 ramps. Two structures with approx. 75 feet between structures.
2	Mathews Ranch Road Undercrossing	0	1	-	Looks like a culvert type structure, approx 195 feet wide?
3	Cleghorn Canyon Wash Undercrossing	300	2		
4	___ Wash Undercrossing	165	2		
5	___ Wash Undercrossing	160	4		Includes two ramp structures.
6	Cleghorn Fire Rd/Cajon Blvd Undercrossing	160	2		Interchange with 4 ramps. Truck weigh station just north of interchange.
7	BNSF/UP Railroad Underpass	55	1		Skew. Approximately 230 ft wide.
8	BNSF/UP Railroad Underpass	80	1		Skew. Approximately 315 ft wide.
9	UP Railroad Underpass	65	1		Median starts to go wide after this structure. Skew. Approximately 325 ft wide.
10	UP Railroad Underpass	155	4		North of Ranchero Road. Two of the four structures are for the frontage roads. There is a 35 ft gap between the I-15 structures. There is a 40 ft gap between NB I-15 and the frontage road and a 20 ft gap between the SB I-15 and the frontage road.
	TOTAL WIDEN	**1,290**	**20**	**0**	

Assumptions/Notes:
Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

OVERCROSSINGS (REPLACE)

ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	SR 138 Overcrossing	55	-	-	Interchange with 5 ramps. Existing structure length is about 310 feet. Steel structure.
2	Oak Hill Overcrossing	40	-	-	Interchange with 4 ramps. The median starts to narrow again at this point (after the Cajon Pass). Frontage road on both sides of freeway. Existing bridge length about 295 feet. Just north of this IC the pavement on the SB side is AC. The northbound side is AC
	TOTAL REPLACE				

Assumptions/Notes:
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan
Assume interchange projects will be done prior to freeway widening and therefore not replaced as part of freeway project.

Devore Interchange Project
I-15 & I-215

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$46,471,000**
Right of Way		**$10,213,000**
Utility Relocations		**$4,050,000**
Construction Items		
Roadway Construction	$43,260,000	
Wall Construction	$3,870,000	
Structures Construction	$61,925,600	
Mobilization	$10,906,000	
Construction Contingency	$16,359,000	
Additional Construction Items	$4,500,000	
Total Construction Cost		**$140,821,000**
Total Project Cost		**$201,555,000**

Devore Interchange
(I-15 & I-215 Interchange)

Total Miles	**3**
Outside Lane (constructed over existing shoulder)	**2**
Outside Lane	**1**
Outside Shoulder	**1.5**
HOV/Inside Lanes	**2**
Inside Shoulder	**1.5**

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$46,471,000**
2	***Right of Way***			
	Right of Way (acre/mile)	5		$4,508,460
	Residential (SF)			$0
	Commercial (SF)			$5,704,182
	Undeveloped land (SF)			**$10,213,000**
	TOTAL Right of Way Cost			
3	***Utility Relocations***			
	Utilities (cost per mile)			$4,050,000
	Low Density	100%	$1,350,000	$0
	High Density	0%	$2,700,000	**$4,050,000**
	TOTAL Utilities Cost			
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	6	$50,000	$300,000
	Earthwork - Other lanes	3	$465,000	$1,395,000
	Earthwork - Shoulder	4.5	$1,495,000	$6,727,500
	Pavement - Lanes	9	$573,000	$5,157,000
	Pavement - Shoulder	4.5	$477,000	$2,146,500
	Subtotal - Outside Paving and Earthwork			$15,726,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	10.5	$58,000	$609,000
	Pavement - Lanes	6	$573,000	$3,438,000
	Pavement - Shoulder	4.5	$477,000	$2,146,500
	Subtotal - Inside Paving			$6,193,500
4c	*Barrier*			
	Center barrier per mile	3	$500,000	$1,500,000
	Other barrier per mile	3	$160,000	$480,000
	Subtotal - Barrier			$1,980,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	2.00	$535,000	$3,210,000
	Ramp Mod. (ea. ramp)	8	$100,000	$800,000
	Subtotal Misc. Paving			$4,010,000
	Subtotal Earthwork, Paving, and Barrier			$27,909,500
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$1,395,475
	Front End Work	15%		$4,186,425
	Drainage	15%		$4,186,425
	Electrical	10%		$2,790,950
	Miscellaneous	10%		$2,790,950
	Subtotal Other Roadway Items			$15,350,225
	TOTAL Roadway Construction Cost			**$43,260,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	30%	$3,000,000	$2,700,000
	Soundwall per mile	30%	$1,300,000	$1,170,000
	TOTAL Wall Construction Cost			**$3,870,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	281,480	$220	$61,925,600
	U/C Widening (sf)	0	$232	$0
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$61,925,600**
	SUBTOTAL CONSTRUCTION COST			**$109,056,000**
8	***Mobilization***	10%		$10,906,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$16,359,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	2	$500,000	$1,000,000
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	1	$2,000,000	$2,000,000
	Landscape (per mile)	3	$500,000	$1,500,000
	Subtotal Additional Features			$4,500,000
11	**TOTAL CONSTRUCTION COST**			**$140,821,000**
12	**TOTAL PROJECT COST**			$201,555,000
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

CAJON PASS PROJECTS WORKSHEET

PROJECT:	Devore Interchange - Alternative 1
PROJECT LIMITS:	From the railroad underpass on I-15 and from just south of Devore Road interchange on I-215 to Kenwood Ave interchange on I-15
PROJECT LENGTH (MI):	3 total (2.2 on I-15 and 0.8 on I-215)
PROJECT SCOPE:	Reconfigure interchange so that I-15 is the major movement through the interchange and to have 4 lanes of traffic in each direction on I-215 through the interchange.

ROADWAY FACTORS:

OUTSIDE LANE		
INSIDE LANE		Assume 823,528 sq ft of roadway requiring major grading and 724,912 sq ft requiring minor grading. Assume of the total 1,548,440 sq ft of roadway, there is a total of 596,900 sq feet of shoulder.
AUXILIARY		
OUTSIDE SHOULDER		
RETAINING WALL		Assume 180 feet of retaining wall average 10 feet high (approximate area of 1800 sq ft)
SOUND WALL	-	Assume 3579 feet of sound wall at approximately 10 feet high (35,790 sq t)
RAMPS TOTAL	8	Includes the ramps at the Devore Road interchange and the Kenwood interchange.

BRIDGE FACTORS:

BRIDGE WIDEN FACTOR (SINGLE)	-
BRIDGE WIDEN FACTOR (MULTI)	-
BRIDGE REPLACE LENGTH	VAR
BRIDGE REPLACE WIDTH	VAR

RIGHT OF WAY AND UTILITY FACTORS:

RIGHT OF WAY ACRE/MILE	5
RESIDENTIAL	5%
COMMERCIAL	25%
UNDEVELOPED LAND	60%
HIGH DENSITY UTILITIES	0%
LOW DENSITY UTILITIES	100%

OTHER FACTORS:

FWY TO FWY INTERCHANGES	-
MAJOR DRAINAGE FACILITIES	
MAJOR WATER CROSSINGS	1
RAILROAD OVERCROSSINGS	-
RAILROAD UNDERCROSSINGS	1

GENERAL ASSUMPTIONS AND NOTES:

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Potential for additional seismic design considerations for structures.

Assume that realignment will result in replacing undercrossings rather than just widen.

REFERENCE DOCUMENTS:

I-15 Comprehensive Corridor Study, Final Report. Parsons Brinckerhoff. December 20, 2005.

CAJON PASS PROJECTS WORKSHEET

BRIDGES: (South to North)

UNDERCROSSINGS (REPLACE)

ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	TOTAL REPLACE AREA (SQ FT)	NOTES
1	I-15 SB over BNSF/UP Railroad	280	1	26,880	Assume width can accommodate 5 travel lanes and shoulders and gore (Use average width of 96 feet)
2	I-15 NB over BNSF/UP Railroad	280	1	22,400	Assume width can accommodate 5 travel lanes and shoulders. (Width of approx. 80 feet)
3	I-215 NB to I-15 SB Connector over Cajon Creek Wash	685	1	21,920	Assume can accommodate 1 travel lane and two shoulders (Width of 32 feet)
4	I-15 SB over Cajon Creek Wash	570	1	38760	Assume can accommodate 4 travel lanes and shoulders (Width of 68 feet)
5	I-15 NB over Cajon Creek Wash	690	1	46,920	Assume can accommodate 4 travel lanes and shoulders (Width of 68 feet)
6	I-15 NB to I-215 SB Connector over Cajon Creek Wash	500	1	16,000	Assume can accommodate 1 travel lane and two shoulders. (Width of 32 feet)
7	I-15 SB over I-215 SB Connector and over the I-215 NB to I-15 SB Connector	1140	1	77,520	Assume can accommodate 4 travel lanes and shoulders. (Width of 68 feet)
8	I-15 NB over I-215 SB Connector and over the I-215 NB to I-15 SB Connector	360	1	24,480	Assume can accommodate 4 travel lanes and shoulders. (Width of 68 feet)
9	I-215 SB over the I-215 NB to I-15 SB Connector	150	1	6,600	Assume accommodates 2 travel lanes and shoulders. (Width of 44 feet)
10	Kenwood Avenue Undercrossing	-	2	-	Assume no change to structures. Interchange with 4 ramps.
TOTAL UNDERCROSSING REPLACE		4655		281,480	

Assumptions/Notes:
Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.

OVERCROSSINGS (REPLACE)

ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	Devore Overcrossing over I-215	-	-	-	Assume can accommodate widening of I-215 and realignment. Bridge has open abutments and no columns at the edge of traveled way. Bridge slopes down from north to south. Length of bridge is approximately 265 feet. Interchange with 4 ramps.
2	Devore Overcrossing over the I-15 NB to I-215 SB Connector.	-	-	-	Assume can accommodate widening of I-215 and realignment. Bridge has open abutments and no columns at the edge of traveled way. Length of bridge is approximately 135 feet. Part of interchange see above.

Assumptions/Notes:

2010-2040 Measure I
Strategic Plan

Victor Valley Subarea
Cost Estimates

July 19, 2006

2010-2040 Measure I Strategic Plan

Victor Valley Subarea

Project Description	Updated Project Cost Estimate
Major Local Highways:	
I-15 Widening (Seg 2)	***$96,829,000***
from Route 395 to 1 mile south of Bear Valley Road	
I-15 Widening (Seg 1)	***$301,340,000***
from 1 mile south of Bear Valley Road to Mojave River	
Interchange Projects:	
Ranchero Road	***$66,800,000***
New interchange on I-15 at Ranchero Road	
Eucalyptus Street	***$69,400,000***
New interchange on I-15 at Eucalyptus St.	
La Mesa Road/Nisqualli Road	***$69,100,000***
New interchange on I-15 at	

Cost Estimate Unit Rates - Highway/Expressway and Arterials (Desert Areas)

Note: Rates subject to adjustment within indivdual estimates to account for specific project conditions

	Units	Rate
Two Lane Arterial		
AC Pavement - assume two 12' lanes w/o shoulders w/ 6" AC and 8" AB	Mile	$545,000
Grading/Earthwork - assume minimal excavation (2 foot on each lane)	Mile	$94,000
Retaining Walls - none	Mile	$0
Intersection tie-ins to existing roads	each	$40,000
Subtotal		*$679,000*
Other Roadway Items (drainage, removals, front end work, electrical, and striping/signs - assume 40%)		$271,600
Mobilization and Contingency (10% and 15%)		$237,650
Total Construction Cost per mile		*$1,188,250*
Utilities	Lump Sum/mile	$200,000
Right of Way -	Lump Sum/mile	$500,000
Support - PA/ED, Engineering, Construction Mgmt., Misc. (33% of Construction Total)		$392,123
Total Cost (per mile)		**$2,280,373**

Note: AC price = $85/ton; Aggregate Base=$45/cy; Earthwork=$10/cy; C&G=$12/lf; Sidewalk - 3 foot wide at $3/sf

Additional Items (add to cost per mile): $275,000

Curb, gutter and sidewalk on two sides

Four Lane Expressway	
Total Cost (per mile)	**$30,000,000**

Six Lane Highway	
Total Cost (per mile)	**$35,000,000**

I-15 Widening Project (Segment 2) from US 395 to 1 mi. S/O Bear Valley Rd.

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		$20,897,000
Right of Way		$4,509,000
Utility Relocations		$8,100,000
Construction Items		
Roadway Construction	$43,608,000	
Wall Construction	$4,650,000	
Structures Construction	$0	
Mobilization	$4,826,000	
Construction Contingency	$7,239,000	
Additional Construction Items	$3,000,000	
Total Construction Cost		$63,323,000
Total Project Cost		$96,829,000

I-15 Widening (Seg 2)
from Route 395 to 1 mile south of Bear Valley Road

Total Miles	6
Outside Lane (constructed over existing shoulder)	2
Outside Lane	0
Outside Shoulder	2
HOV/Inside Lanes	1
Inside Shoulder	2

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$20,897,000**
2	***Right of Way***			
	Right of Way (acre/mile)	0.2		
	Residential (SF)			$1,803,384
	Commercial (SF)			$2,352,240
	Undeveloped land (SF)			$352,836
	TOTAL Right of Way Cost			**$4,509,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			$8,100,000
	Low Density	100%	$1,350,000	$0
	High Density	0%	$2,700,000	**$8,100,000**
	TOTAL Utilities Cost			
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	12	$50,000	$600,000
	Earthwork - Other lanes	0	$230,000	$0
	Earthwork - Shoulder	12	$490,000	$5,880,000
	Pavement - Lanes	12	$357,000	$4,284,000
	Pavement - Shoulder	12	$298,000	$3,576,000
	Subtotal - Outside Paving and Earthwork			$14,340,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	18	$58,000	$1,044,000
	Pavement - Lanes	6	$357,000	$2,142,000
	Pavement - Shoulder	12	$298,000	$3,576,000
	Subtotal - Inside Paving			$6,762,000
4c	*Barrier*			
	Center barrier per mile	6	$500,000	$3,000,000
	Other barrier per mile	6	$160,000	$960,000
	Subtotal - Barrier			$3,960,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	1.00	$535,000	$3,210,000
	Ramp Mod. (ea. ramp)	8	$100,000	$800,000
	Subtotal Misc. Paving			$4,010,000
	Subtotal Earthwork, Paving, and Barrier			$29,072,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$1,453,600
	Front End Work	15%		$4,360,800
	Drainage	15%		$4,360,800
	Electrical	5%		$1,453,600
	Miscellaneous	10%		$2,907,200
	Subtotal Other Roadway Items			$14,536,000
	TOTAL Roadway Construction Cost			**$43,608,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	25%	$1,800,000	$2,700,000
	Soundwall per mile	25%	$1,300,000	$1,950,000
	TOTAL Wall Construction Cost			**$4,650,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	0	$232	$0
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$0**
	SUBTOTAL CONSTRUCTION COST			**$48,258,000**
8	***Mobilization***	10%		$4,826,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$7,239,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	0	$500,000	$0
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	0	$2,000,000	$0
	Landscape (per mile)	6	$500,000	$3,000,000
	Subtotal Additional Features			$3,000,000
11	**TOTAL CONSTRUCTION COST**			**$63,323,000**
12	**TOTAL PROJECT COST**			**$96,829,000**
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

I-15 Widening Project (Segment 1) from 1 mi. S/O Bear Valley Rd. to Route 18

2010-2040 Measure I Strategic Plan
Conceptual Cost Estimate

Project Support		**$40,497,000**
Right of Way		**$124,627,000**
Utility Relocations		**$13,500,000**
Construction Items		
Roadway Construction	$66,828,000	
Wall Construction	$14,600,000	
Structures Construction	$11,943,360	
Mobilization	$9,338,000	
Construction Contingency	$14,006,000	
Additional Construction Items	$6,000,000	
Total Construction Cost		**$122,716,000**
Total Project Cost		**$301,340,000**

I-15 Widening (Seg 1)
from 1 mile south of Bear Valley Road to Mojave River

Total Miles	8
Outside Lane constructed over existing shoulder	2
Outside Lane	1
Outside Shoulder	2
HOV/Inside Lanes	0
Inside Shoulder	2

Item	Cost Category	Factor	Unit	Cost
1	***Project Support***			
	Percentage of constr. cost	33%		
	PA/ED			
	Engineering			
	Program Management & Oversight			
	Construction Management			
	TOTAL Project Support Cost			**$40,497,000**
2	***Right of Way***			
	Right of Way (acre/mile)	7		
	Residential (SF)			$16,831,584
	Commercial (SF)			$87,816,960
	Undeveloped land (SF)			$19,978,358
	TOTAL Right of Way Cost			**$124,627,000**
3	***Utility Relocations***			
	Utilities (cost per mile)			
	Low Density	75%	$1,350,000	$8,100,000
	High Density	25%	$2,700,000	$5,400,000
	TOTAL Utilities Cost			**$13,500,000**
4	***Roadway Construction***			
4a	*Paving and Earthwork - **Outside** Widening*			
	Earthwork - 1st lane	16	$50,000	$800,000
	Earthwork - Other lanes	8	$230,000	$1,840,000
	Earthwork - Shoulder	16	$490,000	$7,840,000
	Pavement - Lanes	24	$357,000	$8,568,000
	Pavement - Shoulder	16	$298,000	$4,768,000
	Subtotal - Outside Paving and Earthwork			$23,816,000
4b	*Paving and Earthwork - **Inside** Widening*			
	Earthwork	16	$58,000	$928,000
	Pavement - Lanes	0	$357,000	$0
	Pavement - Shoulder	16	$298,000	$4,768,000
	Subtotal - Inside Paving			$5,696,000
4c	*Barrier*			
	Center barrier per mile	8	$500,000	$4,000,000
	Other barrier per mile	8	$160,000	$1,280,000
	Subtotal - Barrier			$5,280,000
4d	*Miscellaneous Paving*			
	Cost of frontage roads, local streets, misc. widening, ramps, etc.			

	Non-Freeway Road/Street	2.00	$535,000	$8,560,000
	Ramp Mod. (ea. ramp)	12	$100,000	$1,200,000
	Subtotal Misc. Paving			$9,760,000
	Subtotal Earthwork, Paving, and Barrier			$44,552,000
4e	*Other Roadway Construction Items - percentage of Earthwork, Paving, and Barrier costs*			
	Removals	5%		$2,227,600
	Front End Work	15%		$6,682,800
	Drainage	15%		$6,682,800
	Electrical	5%		$2,227,600
	Miscellaneous	10%		$4,455,200
	Subtotal Other Roadway Items			$22,276,000
	TOTAL Roadway Construction Cost			**$66,828,000**
5	***Wall Construction - Soundwalls and Retaining***			
	Retaining wall per mile	50%	$3,000,000	$12,000,000
	Soundwall per mile	25%	$1,300,000	$2,600,000
	TOTAL Wall Construction Cost			**$14,600,000**
6	***Structures Construction***			
	Includes replacements, widenings and allowance for associated street/ramp modifications			
	O/C - Replacement (sf)	0	$250	$0
	U/C Widening (sf)	51,480	$232	$11,943,360
	R/R O/C Replacement (ea.)	0	$8,000,000	$0
7	**TOTAL Structures Cost**			**$11,943,360**
	SUBTOTAL CONSTRUCTION COST			**$93,372,000**
8	***Mobilization***	10%		$9,338,000
	Percentage of SUBTOTAL Construction Cost			
9	***Construction Contingency***	15%		$14,006,000
	Percentage of SUBTOTAL Construction Cost			
10	***Additional Potential Features and Items***			
	Significant Water Crossings	0	$500,000	$0
	Major Freeway/Freeway I/C	0	$15,000,000	$0
	Major Drainage Systems (ea.)	1	$2,000,000	$2,000,000
	Landscape (per mile)	8	$500,000	$4,000,000
	Subtotal Additional Features			$6,000,000
11	**TOTAL CONSTRUCTION COST**			**$122,716,000**
12	**TOTAL PROJECT COST**			$301,340,000
	Sum of Project Support, Right of Way, Utilities, and Construction Costs			

VICTOR VALLEY LOCAL MAJOR STREETS PROJECT WORKSHEET

PROJECT:	I-15 Widening
PROJECT LIMITS:	US 395 to Stoddard Wells Road
PROJECT LENGTH:	Approx 16?
PROJECT SCOPE:	Add 1 HOV in each direction.

ROADWAY FACTORS:		
OUTSIDE LANE		
INSIDE LANE	2	
AUXILIARY	-	
OUTSIDE SHOULDER		
RETAINING WALL	0	
SOUND WALL	0.17	
RAMPS TOTAL	40	Does not include proposed interchange ramps.

BRIDGE FACTORS:	
BRIDGE WIDEN FACTOR (SINGLE)	52
BRIDGE WIDEN FACTOR (MULTI)	-
BRIDGE REPLACE LENGTH	-
BRIDGE REPLACE WIDTH	-

RIGHT OF WAY AND UTILITY FACTORS:		
RIGHT OF WAY ACRE/MILE	0.875	Per PBs report, approximately 9 ac for Seg 1 and 5 ac for Seg 2 will be needed (for 1 HOV in each direction).
RESIDENTIAL	15%	PBs report states approx 2 ac residential, 2 ac commercial, 2 ac public services, utilities, remaining acreage is other?
COMMERCIAL	15%	
UNDEVELOPED LAND	35%	
HIGH DENSITY UTILITIES	60%	
LOW DENSITY UTILITIES	40%	

OTHER FACTORS:	
FWY TO FWY INTERCHANGES	0
MAJOR DRAINAGE	0
MAJOR WATER CROSSINGS	1
RAILROAD OVERCROSSINGS	0
RAILROAD UNDERCROSSINGS	1

GENERAL ASSUMPTIONS AND NOTES:

Assume sufficient right of way in median to accommodate most of widening with the exception of slight outside widening (approximately 5 feet on each side).

Assume ADL soil can be reused onsite

Assume minimal retrofit to existing structures included in estimate. Major retrofit work not included.

Per PBs comprehensive corridor study, the existing I-15 between US-395 and D Street is generally a 6 lane facility with a 10 to 15 ft median and 4-8 ft median shoulder, 4-12 ft travel lanes (in each direction) and an 8 to 12 ft outside shoulder. There is approximately 12 to 24 ft of additional vacant right of way (outside).

Auxiliary lane are present at the Roy Rogers on-ramp to Mojave off-ramp in the northbound direction and in the southbound direction between D St and Mojave, Mojave and Roy Rogers, and Roy Rogers to Palmdale.

Per PBs report, frontage roads generally parallel I-15 through Victor Valley. On the northbound side a continuous frontage frontage road (Mariposa Rd) is provided from Oak Hill to Palmdale. On the southbound side there is a frontage road from Palmdale to Main (Amargosa Rd) and from Joshua to Oak Hill (Caliente Rd). Frontage roads are generally undivided with one lane in each direction.

The Interchange reconstruction report estimated approximately 65 acres of right of way would be required for the length of project between Mojave River and Stoddard Wells. ($8MM)

REFERENCE DOCUMENTS:

I-15 Comprehensive Corridor Study, Final Report. Parsons Brinckerhoff. December 20, 2005.

Interchange Reconstruction n the City of Victorville, Draft Project Report. Jim Basicom and Guy Visbal (San Bernardino County Freeway Study Team). January 2005.

VICTOR VALLEY LOCAL MAJOR STREETS PROJECT WORKSHEET

BRIDGES: (South to North)

UNDERCROSSINGS (WIDEN)

ID	BRIDGE	BRIDGE LENGTH (FT)	NO. OF STRUCTURES	WIDEN AREA (FT)	NOTES
1	California Aqueduct Undercrossing		1	-	Frontage roads adjacent to both NB and SB sides of freeway. NB side frontage road peels away from freeway a bit around Eucalyptus St.
2	National Trails Hwy/D Street Undercrossing	400	1	20,800	Interchange with 4 ramps. Crosses over railroad (4 tracks). (no median between this crossing and Mojave River crossing). Outside widen. I-15 ascends at a 4.54% grade at the ramp entrance. Per draft PSR, existing structure is 6 span composite welded steel girder structure. Existing minimum clearance above railroad is 7.31 m (24 ft)
3	E Street Undercrossing	-	-	-	Interchange with 4 ramps. Overcrossing structure is same as D street above.
4	Mojave River Undercrossing	590	1	30,680	Major water crossing. Median returns north of the crossing. Outside widen. Existing width is 85 ft.
	TOTAL WIDEN	990	3	51,480	

Assumptions/Notes:
Bridge lengths/widths scaled off GIS resources from SANBAG website. Values rounded to nearest 5 foot increment.
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan

OVERCROSSINGS (REPLACE)

ID	BRIDGE	EXISTING BRIDGE WIDTH (FT)	ASSUMED REPLACE BRIDGE WIDTH (FT)	REPLACE AREA (SQ FT)	NOTES
1	US 395 Overcrossing	35	35	-	Bridge length approximately 385 feet. Steel Structure. Interchange with 2 ramps. Assume accommodates widening
2	Joshua Street Overcrossing *	30	-	-	Partial interchange with 2 ramps. Steel structure approximately 175 feet long. Frontage road adjacent to northbound 15 after Joshua IC.
3	Main Street Overcrossing	45	-	-	Interchange with 6 ramps. Bridge approximately 250 feet long. Assume bridge accommodates widening.
4	Bear Valley Road Overcrossing *	100	-	-	Interchange with 5 ramps. Existing structure length approximately 345 feet. Existing structure has columns located at toe of abutment.
5	Palmdale Overcrossing	85	85	-	Interchange with 6 ramps. Existing length is approx 235 feet. Looks like can accommodate widening. Ramps go under structure.
6	Roy Rogers/La Paz Overcrossing	85	85	-	Interchange with 4 ramps. Existing length is approx 370 feet. Median north of this area is approximately 40 feet. Frontage road on NB side between Palmdale and La Paz. Looks like can accommodate widening. Ramps also go under structure.
7	Mojave Drive Overcrossing	55	55	-	Interchange with 4 ramps. Existing length is approx 240 ft. Proposed project that will span I-15 adjacent to this location will accommodate future widening but the existing structure will not accommodate widening.
8	Stoddard Wells Overcrossing	30	-	-	Interchange with 4 ramps. Existing length approx 200 ft. Assume accommodates widening. Bridge cannot accommodate outside widening due to column spacing adjacent to traveled way (per PSR report)
	TOTAL REPLACE				

Assumptions/Notes:
* Indicates on the interchange project list per the Nexus Study and Expenditure Plan
Assume interchange projects will be done prior to freeway widening and therefore not replaced as part of freeway project.

By Tim Grogan

Inflation Maintains Strong Momentum

Steel prices start to pick back up after brief pause in 2005

High energy and material commodity prices continue to fuel construction industry inflation, which broke into the double-digit realm after the surge in steel prices during 2004 and has remained near those levels ever since. "It's a market I have not seen in my lifetime," says Neil Platz, vice president of procurement for Turner Corp., New York City. "I can't remember when everything was going up and going up at a good rate," he adds.

The selling price of new construction projects increased another 2.3% during the second quarter after climbing 2.5% during the first quarter of the year, according to three indexes that include productivity, overhead and margins along with labor and material costs (see table). The latest gain keeps the average annual increase for this group of indexes at 10%.

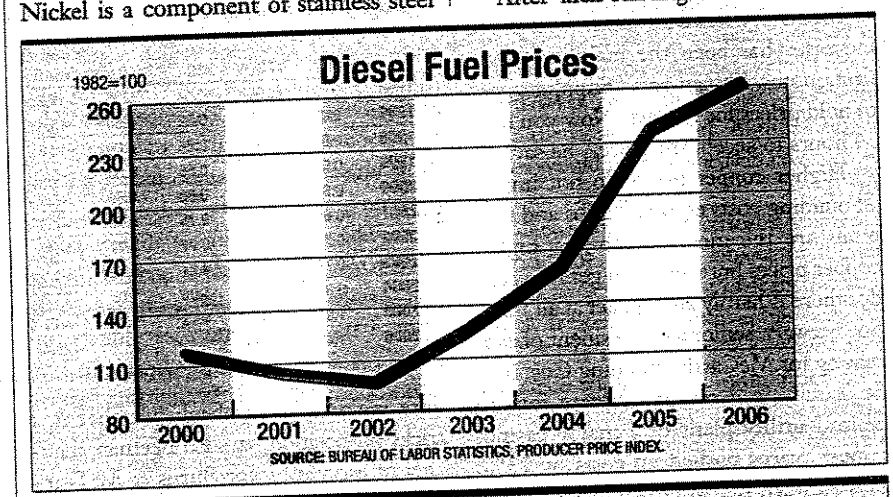
Indexes that measure only labor and material costs rose 1.2% this quarter and are up 6% for the year. The gap between the escalation rates of these two groups of indexes indicates that margins may be growing as a result of the very strong construction markets, which through April were running 9% above last year's record pace, according to the U.S. Dept. of Commerce.

For example, Karl Almstead, the Turner vice president responsible for compiling that firm's selling-price index, reports that the cost of copper wire quoted by one supplier increased 105% in a six-week period from April to mid-May of this year. At the same time, the Bureau of Labor Statistics' producer price index for copper in May showed a year-to-year increase of 87%. Wire prices have started to ease in June. "There are other influences," he says. "It is supply and demand and what the market will bear."

Nevertheless, final costs received a significant push from commodity prices. "Copper was the champ in the surge of commodity prices," which, in the second quarter were up 124% over a year ago, according to the Comex spot price, says John Mothersole, economist with Global Insight, Washington, D.C. "But I also would give kudos to aluminum (up 52%), nickel (up 21%) and zinc (up 170%). Nickel is a component of stainless steel prices and zinc affects galvanized sheet prices.

Mothersole expects these prices to only ease slightly in coming months (see chart). "Unlike last time prices spiked there are no large mining projects on the boards that would help alleviate supply problems in the near future," he says.

After kick-starting inflation in 2004



SOURCE: BUREAU OF LABOR STATISTICS, PRODUCER PRICE INDEX.

Builders' Construction Cost Indexes

NAME, AREA AND TYPE	APRIL 2005	JULY 2005	OCT. 2005	JAN. 2006	APRIL 2006	PERCENT CHANGE QUARTER	PERCENT CHANGE YEAR
GENERAL-PURPOSE COST INDEXES							
ENR 20-city: Construction Cost[1]	684.75	690.92	704.04	713.14	716.41	+0.5	+4.6
ENR 20-city: Building Cost[1]	616.87	621.21	631.35	641.63	641.73	0.0	+4.0
BuRec: General Buildings[2]	270.00	271.00	277.00	279.00	NA	NA	NA
Factory Mutual: Industrial[3]	NA	232.00	NA	236.00	NA	NA	NA
LSI: Material/Labor[1]	688.06	704.90	718.04	724.93	730.14p	+0.8	+6.2
Means: Construction Cost[4]	149.30	151.60	153.60	156.20	157.90	+1.1	+5.8
SmithGroup[5]	138.59	139.38	142.95	143.88	145.81	+1.3	+5.2
SELLING PRICE INDEXES—BUILDING							
LSI: Subcontractor[1]	759.54	781.71	800.36	818.47	824.31p	+1.5	+8.8
Turner: General Building[1]	704.00	726.00	746.00	766.00	787.00	+2.7	+11.8
Rider Hunt Levett & Bailey[2]	115.81	117.50	119.83	122.83	126.06	+2.6	+8.9
VALUATION INDEXES							
Boeckh: Commercial/Manufacturing[1]	659.03	652.67	666.56	679.28	692.80	+2.0	+5.1
Marshall & Swift: Industrial[5]	154.70	156.10	156.90	160.90	163.10	+1.4	+5.4
M&S Eastern Region	155.60	157.50	159.00	163.00	165.30	+1.4	+6.2
M&S Central Region	157.20	158.60	159.50	163.50	165.50	+1.2	+5.3
M&S Western Region	151.10	151.90	152.00	156.00	158.30	+1.5	+4.8
COMMERCE RESIDENTIAL BUILDING COST INDEXES							
New Single-Family[6]	143.90	148.00	150.00	153.00	NA	NA	NA
New Warehouse[6]	102.90	106.00	107.50	109.10	110.90	+1.6	+7.8

[1]BASE: 1967=100; [2]BASE: 1977=100; [3]BASE: 1980=100; [4]BASE: 1993=100; [5]BASE: 1992=100. [6]BASE: 1992=100.[7]BASE: APRIL 2001=100.
P=PRELIMINARY APRIL REPRESENTS MARCH DATA. THE AUSTIN CO. INDUSTRIAL BUILDING COST INDEX HAS BEEN DISCONTINUED.

with huge increases, steel prices eased back but now are once again contributing to escalation (ENR 3/22/04 p. 24). "Steel prices reached a plateau where everyone was comfortable with $520 per ton but now they are heading back up," says Turner's Platz. He says mills announced a $20 per ton increase effective June 1 after raising prices $25 per ton in May. In addition, he says warehouse stock is low and is refilling at today's higher prices. "People that don't have time to wait for a mill order and have to buy warehouse steel are going to be in for a shock," says Platz. Unfortunately, he also notes that many mills are booked and are not taking new orders until August.

"If you are bidding work, you don't know where prices are going and that uncertainty is creeping in to the market," says Platz. "People are becoming conservative in their bidding."

Energy prices are inflation's other main driver. The producer price index for May shows diesel fuel prices rising 40% above a year ago (see chart p. 44). This is the fourth consecutive year of strong price increases and it is putting relentless pressure on the cost of running equipment and delivering materials.

With crude prices hovering around $70 per barrel, most petroleum-based products also are under pressure. May's producer price index shows year-to-year increases of 18% for plastic construction products and 30% for asphalt paving.

"We expect crude oil prices to drop back to $60 per barrel by the end of the year, alleviating price pressure on insulation, roofing and plastic products," says Michele Halickman, construction materials analyst at Global Insight. The exception will be asphalt paving prices, she says. "As refineries switch over to lighter crude and the production of low-sulfur diesel fuel, there is less asphalt available," she notes. [Asphalt is a by-product in the refinery process.] "A number of producers also have low inventories, so there are a lot of concerns on the supply side." ■

Construction Materials Price Movement in 2005-06

		NOV.	DEC.	JAN.	FEB.	MARCH	APRIL	MAY
AGGREGATES	Monthly % chg.	+0.7	+0.2	+3.3	+0.3	+0.9	+0.9	+0.3
	Annual % chg.	+7.8	+7.7	+8.4	+8.1	+9.0	+8.9	+8.7
ALUMINUM SHEET	Monthly % chg.	+1.1	+2.3	+2.3	+4.1	+1.7	+0.9	+2.6
	Annual % chg.	NA	4.9	+6.6	+9.6	+10.4	+10.0	+15.0
ASPHALT PAVING MIXTURE	Monthly % chg.	+1.3	+1.0	+1.8	+2.0	+3.2	+3.7	+6.7
	Annual % chg.	+13.7	+14.4	+15.2	+16.9	+20.5	+23.7	+29.8
BRICKS	Monthly % chg.	+1.7	+0.4	+2.2	-0.2	+1.0	+1.2	-0.8
	Annual % chg.	+7.9	+8.0	+7.4	+6.7	+7.0	+8.2	+6.9
CEMENT	Monthly % chg.	+0.2	+0.4	+5.4	+0.8	+0.7	+1.6	+0.3
	Annual % chg.	+11.9	+12.3	+14.5	+14.1	+14.8	+14.8	+14.9
COPPER, PIPE AND TUBE	Monthly % chg.	+6.9	+1.6	+4.6	+1.8	+0.3	+16.1	+17.5
	Annual % chg.	+37.5	+38.0	+39.4	+45.3	+43.1	+70.7	+94.4
DIESEL FUEL	Monthly % chg.	-21.9	-3.7	-0.7	-0.6	+5.0	+12.0	+4.0
	Annual % chg.	+29.1	+46.8	+39.7	+31.0	+18.7	+31.4	+40.3
DUCTILE IRON	Monthly % chg.	0.0	0.0	+5.4	+0.8	0.0	0.0	0.0
	Annual % chg.	+8.8	+2.5	+8.0	+6.3	+6.3	+6.3	+6.3
FABRICATED STEEL, BLDG.	Monthly % chg.	0.0	+0.2	+0.5	+1.0	-0.2	+0.2	+0.3
	Annual % chg.	+3.1	+3.1	+3.6	+4.3	+4.1	+4.1	+4.3
GLASS, FLAT	Monthly % chg.	+0.7	-0.2	+0.1	-3.0	+2.7	-0.6	+0.5
	Annual % chg.	+3.1	+1.9	+1.5	-1.8	-0.2	-0.9	+0.5
GYPSUM PRODUCTS	Monthly % chg.	+0.1	+3.3	+1.9	+4.2	-0.8	+0.6	+4.7
	Annual % chg.	+14.6	+17.6	+18.5	+23.0	+21.2	+22.0	+25.9
LUMBER, SOFTWOOD	Monthly % chg.	-3.3	+1.3	+5.1	+1.3	-0.6	-1.8	+2.7
	Annual % chg.	-0.7	-0.4	+2.1	-2.5	-3.9	-4.7	+3.4
PAINT	Monthly % chg.	+1.7	+0.5	+0.7	+1.2	+2.3	-0.1	+0.4
	Annual % chg.	+7.5	+7.9	+7.3	+6.7	+8.7	+8.3	+7.7
PIPE & PIPE FITTING	Monthly % chg.	+2.0	+1.1	+0.5	+0.4	-0.1	-0.1	+0.2
	Annual % chg.	+5.7	+6.9	+5.3	+5.7	+4.5	+4.0	+3.8
PLYWOOD	Monthly % chg.	-14.6	-0.3	+0.9	-0.8	+0.1	+1.2	-3.3
	Annual % chg.	+3.9	-2.9	-2.7	-5.8	-3.9	-0.6	+1.5
PVC PRODUCTS	Monthly % chg.	+7.3	+0.9	+1.6	+0.4	-0.1	-1.0	0.0
	Annual % chg.	+20.8	+21.6	+22.1	+21.8	+20.5	+18.2	+18.0
READY-MIX CONCRETE	Monthly % chg.	+1.1	-0.1	+5.3	-1.0	+1.4	+1.3	+0.5
	Annual % chg.	+11.6	+11.3	+13.3	+11.1	+11.9	+12.7	+13.0
SHEET METAL	Monthly % chg.	+0.2	0.0	+0.5	0.0	+0.8	-0.1	+0.6
	Annual % chg.	+0.2	+0.1	+0.2	0.0	+1.1	+0.9	+1.8
WIRE AND CABLE	Monthly % chg.	+5.5	+4.1	+0.2	+0.6	-0.3	+5.7	+16.6
	Annual % chg.	+16.6	+21.1	+21.2	+20.4	+18.3	+25.8	+46.6

SOURCE: BUREAU OF LABOR STATISTICS, NA= NOT AVAILABLE

"Big Box" Material Prices

	U.S. AVG.	BIRMINGHAM	BOSTON	CHICAGO	DALLAS	WASHINGTON D.C.	DETROIT	NEW YORK	SACRAMENTO	SEATTLE	ST. LOUIS
MATERIAL PRICE											
WALLBOARD, Regular	9.04	9.76	9.86	7.67	NA	9.49	7.89	9.82	9.89	7.87	9.15
PLYWOOD SHEATHING GRADE	12.81	9.99	13.28	12.98	10.99	11.99	11.99	13.04	13.95	11.99	17.95
ORIENTED STRAND BOARD	8.99	7.99	7.99	10.99	7.99	7.99	10.99	10.02	7.99	7.99	9.99
FRAMING LUMBER	2.77	2.61	3.18	2.49	2.15	2.43	3.74	2.90	2.56	2.69	2.97
COPPER WATER TUBING	21.36	20.80	23.42	21.33	NA	21.33	21.33	20.56	NA	20.80	21.33
PVC PIPE 4-IN.	17.86	15.04	16.96	20.05	14.70	20.05	NA	18.22	NA	NA	20.05
STEEL PIPE 2-IN.	27.98	NA	NA	27.98	NA	27.98	27.98	27.98	NA	NA	NA
COPPER ELECTRIC WIRING	105.88	124.00	124.90	102.00	95.90	102.00	102.00	102.00	102.00	102.00	102.00
PORTLAND CEMENT	8.83	9.92	8.87	8.49	8.27	9.92	NA	9.88	7.98	8.47	7.78

SOURCE: ENR CONSTRUCTION ECONOMICS DEPT. WALLBOARD IS 1/2-IN. 4X8 SHEET; PLYWOOD IS 3-PLY, 1/2-IN., 4X8 SHEET; ORIENTED STRAND BOARD IS 1/2-IN., 4X8 SHEET; FRAMING LUMBER IS COMMON 2X4, 8-FT. LENGTH; COPPER WATER TUBING IS TYPE L, 10-FT LENGTH; PVC PIPE IS 4 IN., 10-FT LENGTH; STEEL PIPE IS 2 IN., 10-FT LENGTH; COPPER ELECTRIC WIRING IS 12-2, NON-METALLIC SHEATH, 250-FT PACKAGE; PORTLAND CEMENT IS TYPE 1. NEW YORK CITY IS FIVE-STORE AVERAGE, ALL OTHER CITIES ARE ONE-STORE SPOT PRICE.

SANBAG Acronym List

AB	Assembly Bill
ACE	Alameda Corridor East
ACT	Association for Commuter Transportation
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
AQMP	Air Quality Management Plan
ATMIS	Advanced Transportation Management Information Systems
BAT	Barstow Area Transit
CAC	Call Answering Center
CALACT	California Association for Coordination Transportation
CALCOG	California Association of Councils of Governments
CALSAFE	California Committee for Service Authorities for Freeway Emergencies
CALTRANS	California Department of Transportation
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CHP	California Highway Patrol
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Program
CNG	Compressed Natural Gas
COG	Council of Governments
CSAC	California State Association of Counties
CTA	California Transit Association
CTAA	Community Transportation Association of America
CTC	California Transportation Commission
CTC	County Transportation Commission
CTP	Comprehensive Transportation Plan
DMO	Data Management Office
DOT	Department of Transportation
E&H	Elderly and Handicapped
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
ETC	Employee Transportation Coordinator
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FSP	Freeway Service Patrol
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GFOA	Government Finance Officers Association
GIS	Geographic Information Systems
HOV	High-Occupancy Vehicle
ICMA	International City/County Management Association
ICTC	Interstate Clean Transportation Corridor
IEEP	Inland Empire Economic Partnership
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
IIP/ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation Systems
IVDA	Inland Valley Development Agency
JARC	Job Access Reverse Commute
LACMTA	Los Angeles County Metropolitan Transportation Authority
LNG	Liquefied Natural Gas
LTF	Local Transportation Funds
MAGLEV	Magnetic Levitation
MARTA	Mountain Area Regional Transportation Authority
MBTA	Morongo Basin Transit Authority
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MIS	Major Investment Study
MOU	Memorandum of Understanding

SANBAG Acronym List

MPO	Metropolitan Planning Organization
MSRC	Mobile Source Air Pollution Reduction Review Committee
MTP	Metropolitan Transportation Plan
NAT	Needles Area Transit
OA	Obligation Authority
OCTA	Orange County Transportation Authority
OWP	Overall Work Program
PA&ED	Project Approval and Environmental Document
PASTACC	Public and Specialized Transportation Advisory and Coordinating Council
PDT	Project Development Team
PPM	Planning, Programming and Monitoring Funds
PSR	Project Study Report
PTA	Public Transportation Account
PVEA	Petroleum Violation Escrow Account
RCTC	Riverside County Transportation Commission
RDA	Redevelopment Agency
RFP	Request for Proposal
RIP	Regional Improvement Program
ROD	Record of Decision
RTAC	Regional Transportation Agencies' Coalition
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agencies
SB	Senate Bill
SAFE	Service Authority for Freeway Emergencies
SANBAG	San Bernardino Associated Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCRRA	Southern California Regional Rail Authority
SED	Socioeconomic Data
SHA	State Highway Account
SHOPP	State Highway Operations and Protection Program
SOV	Single-Occupant Vehicle
SRTP	Short Range Transit Plan
STAF	State Transit Assistance Funds
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TCM	Transportation Control Measure
TCRP	Traffic Congestion Relief Program
TDA	Transportation Development Act
TEA	Transportation Enhancement Activities
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
TMC	Transportation Management Center
TMEE	Traffic Management and Environmental Enhancement
TOC	Traffic Operations Center
TOPRS	Transit Operator Performance Reporting System
TSM	Transportation Systems Management
USFWS	United States Fish and Wildlife Service
UZAs	Urbanized Areas
VCTC	Ventura County Transportation Commission
VVTA	Victor Valley Transit Authority
WRCOG	Western Riverside Council of Governments

San Bernardino Associated Governments

Governments
SANBAG
Working Together

MISSION STATEMENT

To enhance the quality of life for all residents, San Bernardino Associated Governments (SANBAG) will:

- Improve cooperative regional planning

- Develop an accessible, efficient, multi-modal transportation system

- Strengthen economic development efforts

- Exert leadership in creative problem solving

To successfully accomplish this mission, SANBAG will foster enhanced relationships among all of its stakeholders while adding to the value of local governments.

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